



Volume 63 Issue 01



Happy New Year everyone! Firstly, I want to thank Tom Duff and Rich Hogg for their service as Director and Assistant Director for the last two years. I also want to thank and welcome our new and continuing officers, Sandy Mesics, Joe Zitarelli, and Blair Hogg who will be serving with me as Assistant Director, Secretary, and Treasurer.

As for me, it is an honor and a privilege to serve as Director of LVAAS. I joined LVAAS along with my family in 2020, and served as Secretary in 2022. I also have almost 10 years of experience in pharmaceutical and medical data, managing a team of highly talented individuals at Merck & Co.

The December Holiday party was a big success with at least 80 people in attendance. Great food was provided and enjoyed by all. StellarVue CEO Vic Maris gave an interesting presentation on the evolution of telescopes and what it takes to make world class refractors. A BIG thank you to Felipe Maldonado and the DaVinci Science Center for hosting our holiday party!

A couple of things to note:

- The 2023 budget has officially been approved, and with the new calendar finalized we are ready for the new year.
- LVAAS has grown to 345 members as of 12/18.
- The 2023 General Meeting dates at Muhlenberg College are 1/8, 2/5, and 3/12.

We have vacancies in the Star Party Coordinator, Light Pollution Abatement, and Development leadership positions. If you are interested in volunteering and believe you would make a valuable addition to the team, please get in touch with me. You can find my contact information on the website's contacts page. If you are interested in any of the committees on the contacts page, I highly encourage you to get in touch with the director of that committee. We have a very strong leadership team with many talented members willing to train people who would like to help. Lastly, if you would like to volunteer to help out at work parties, star parties, and other events, please get in touch with our Volunteer Coordinator, Preston Smith. Ad Astra!

Mike Huber

Minutes from the LVAAS General Meeting – December 4, 2022

The December 2022 LVAAS General Meeting and Christmas Party was held at the Da Vinci Science Center, as well as being conducted electronically using an on-line service. Approximately 80 people were in attendance. The event began at 1 p.m. with a pot luck lunch.

Starting at 2 p.m. our General Meeting's presentation was "The Evolution of World Class Refractors" given by Vic Maris, President of Stellarvue. Hans Lippershey is generally given credit for inventing the refractor telescope in 1608. In 1609 Galileo used a telescope of his own making to begin his study. Chester Moore Hall was credited with creating the first Achromatic Telescope between 1729 and 1733. In the late 1800s Ernst Abbe is credited with developing the first Apochromatic Telescope.

Vic discussed the complex process that goes into making the lenses and telescopes at Stellarvue. He stressed the importance of optical accuracy in polishing lenses down to an accuracy of 1/20 of a wavelength as well as eliminating spherical error, astigmatism and trefoil. This process requires almost a year to complete. This accuracy leads to lenses that are tested to Strehl ratios of 0.99. All of this limits Stellarvue to making 400-500 telescopes each year.

Director Thomas Duff opened the business meeting at 3:25 p.m.

Membership - Rich Hogg

- 1st Readings
 - Gregg Heimer
 - Brett White
- 2nd Readings
 - Phillip Doherty
 - Brielle Eisenberg
 - Jeff Spillane
 - Jonathon Tirrell
 - Federico Zayas

Treasurer Report - presented by Tom Duff for Blair Hogg

The Annual Budget as proposed by the Board of Governors was presented to the membership of the Society. Bill Dahlenburg made a motion to approve, with a second from Mike Huber. The Budget was accepted unanimously.

New Officers - Dave Binder

The oath of office was administered to the incoming officers for 2023:

- Director Mike Huber
- Assistant Director Sandy Mesics
- Treasurer Blair Hogg
- Secretary Joe Zitarelli

Astroimaging - Tom Duff

• The next Astroimaging meeting will take place at our South Mountain Headquarters on December 17, at 7 p.m. All interested members are encouraged to attend. There will be no further meetings of the Astroimaging group until April, 2023.

Pulpit Rock Observatories - Frank Lyter

• Frank encouraged members to take advantage of these clear nights to observe the winter sky before the road becomes impassable. If going up to PR you are encouraged to join the Pulpit Rock Buzz mailing list and let others know. Please visit our website for information.

General Comments

- Sandy Mesics noted that on Wednesday night Mars and the Moon will appear to come together.
- Felipe Maldonado from the Da Vinci Science Center thanked LVAAS for assisting at their 2 Solar Parties and a Star Party that were held this past year. LVAAS thanks Felipe and the Science Center for hosting our Christmas party and meeting, and for also granting us venue access free of charge.

Next LVAAS General Meeting:

Our next general meeting will be held at Muhlenberg College on Sunday January 8, 2023 at 3:00 p.m. with the classroom location TBD. Please watch our website for details.

The meeting was adjourned at approximately 3:50 p.m. The presentation by Vic Marris was recorded.

Submitted by Joe Zitarelli, Secretary

Geminids. Hundreds of Geminids! By John Kmetz and Frank Lyter

It sure looks like the efforts of our Winter Projects for 2021-22 have come to full fruition. LVAAS Pulpit Rock Observatories Director Frank Lyter had an idea of what new technologies we could become involved with during the times of pandemic lockdowns and difficulties of having face-to-face meetings. Frank decided to conduct a series of online Zoom sessions where members could collaborate and make contributions from home building some new equipment we did not have in the LVAAS observing arsenal before. This collaboration led to the construction of several meteor cameras made with readily available electronic parts at inexpensive prices. Through a series a problem-solving discussions, we were able to follow and implement the plans as laid out by the Global Meteor Network – No meteor Unobserved to construct our own stations.

The Global Meteor Network is a collection of over 500 cameras coordinated by Dr. Denis Vida at Western University in Ontario, Canada. The GMN's objective was to create a series of site stations around the globe which would be assembled, positioned, and maintained by citizen scientists to generate usable data not available beforehand. Fabricated from a Raspberry Pi single board computer and a low light sensitive IMX291 sensor, each camera points to a section of the night sky to observe and capture meteors as they burn up and streak across the field of view. Each station, with exact GPS coordinates and elevation established, has the GMN's RMS software which collects the positional data of each elongated flash or fireball throughout the night and then sends this information at dawn to the main server located at Western University. In a return information stream, each station receives back a tabular and graphical plot of all trajectories traced back to the radiant source's celestial coordinates.

Each station also produces a daily meteor stack, an overlay of all detected events from that evening. These trajectory plots are often traced back to known sources of meteor showers, often the debris left over from the deterioration of known comets or asteroids. But advanced analysis of the entire data stream has led to the discovery of previously undiscovered objects. The calculated summaries are also forwarded to NASA and other space agencies concerned with the safe operation of satellites and inhabited space stations like the ISS.

With clear skies on the night of December 13-14, 2022, our meteor cameras hit the jackpot with many meteors detected. Station US002D at South Mountain captured 405 Geminids, and 118 sporadics (from random unknown sources.) Station US002L in Upper Providence, PA captured 379 Geminids and 84 sporadics. A very heavy concentration of trajectories was traced back to the radiant region near Castor and Pollux in Gemini, a well-known yearly shower source. These observational results were the most plentiful we've seen since our cameras went online earlier this year, with about twice as many detected as collected during the Perseids Shower this past summer.

LVAAS is now officially part of the Global Meteor Network and a recognized contributor to the worldwide data pipeline. We expect a few more LVAAS member stations to become active in 2023. **Here are some additional files from two evenings in mid-December:**

- Stacked image of all meteors (plus some aircraft)
- Thumbnails of all detected meteors
- Time lapse movies of the entire evening
- Radiant plots showing source of meteors

Link to files:

https://drive.google.com/drive/folders/1riU6bfcMwYef9yF6oqLyB83chqLz7-1N?usp=share_link_

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 technology@lvaas.org Director, LVAAS Technology Committee

Via Sandy Mesics, Programs Chairperson

Upcoming LVAAS General Meeting Speakers

In **February**, we have tentatively scheduled Roxanne Kamin to talk about occultations.

In **November** 2023 we will have Dava Sobel, who has authored several popular astronomy books. Topic TBA. Would you like to speak on a topic of astronomical interest, or know somebody who would? Please provide contact information to Sandy at astrosandy@gmail.com

Via Claudio Stabile, Scouting Activites Coordinator

Claudio is looking for volunteers to host scouting camp weekends for the months of May, August, September and November 2023. <u>Please review the 2023 schedule</u> and contact him <u>claudio.m.stabile@gmail.com</u> if interested.

Via Sandy Messics, Assistant Director

Society member **Ray Harris**, who did a presentation at our July general meeting, has an article published on page 34 of the February, 2023 issue of *Sky & Telescope*. Kudos Ray!

Via Earl Pursell, UACNJ Liason

The 2023 UACNJ Astronomy Calendar is available now, in limited quantity. Cost is \$16, cash or check.

You can get your calendar at our General Meetings where Earl will have them available in January, February and March at Muhlenberg College. They will also be available at South Mountain on Saturday mornings until gone. (Please text or call first: 845-480-1728) Thanks for supporting your local astronomy clubs!

Via Mike Huber, Director

LVAAS would like to thank Dr. Becky Frank for her \$50 donation to our Society for use as needed. She also included a nice holiday card. LVAAS sincerely appreciates your support, Dr. Frank.

Via Bill Dahlenburg, Star Party Coordinator

LVAAS is always looking for volunteers to help out with Star Party activities. Anyone willing to help will be trained on running the telescopes. Training is easy. Planetarium shows are: 6 p.m. for kids, 7 p.m. Presentation, 8 p.m. Planetarium Show for adults. Our next Star Party will be in March, 2023.

Additionally, if anyone is interested in helping with or taking over the organization of LVAAS Star Parties, please let Bill Dahlenburg know: sm_maintenance@lvaas.org

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: **Imager, Lynn Krizan: The Squid (Ou4) and Flying Bat (Sharpless SH2-129) Nebulae,** are 23,000 light-years from Earth. Imaged with a Takahashi FSQ106ED telescope working a F3.64, QHY268M camera, and Astro Physics Mach1 mount. Image is Bi-Color using *Ha*as red and *OIII* as Blue and green and *RGB* stars. 9 hrs., 54 min. of acquisition time.

Sharpless 129 is a H-alpha emission nebula, and the blue-green nebula inside it is known as the Squid. Ou4, discovered in 2011 by amateur astronomer Nicolas Outters, was once thought to be a planetary nebula, but now is thought to be some kind of bipolar outflow from the bright blue star at its center, HR 8119.

LVAAS General Meeting ~ Open to the Public Sunday, January 08 ~ 3 p.m. at Muhlenberg College Trumbower Science Building, Room 130, and on Zoom

Everything You Ever Wanted To Know About Cherry Springs, But Were Afraid To Ask

presented by Eric Loch Public Relations Director, LVAAS



Eric will discuss the past, present, and future of Cherry Springs Astronomy Park. He will also go over all the details about how to attend, basic do's and don'ts etc.

Eric has enjoyed the hobby of amateur astronomy since the first time he looked up at a dark sky full of stars, and like many of us, wondered "what is up there?" While Eric is not an astrophysicist nor a professional astronomer, he has spent many hours with his collection of telescopes enjoying looking out into our universe. Eric has served on the Cherry Springs Dark Sky Fund Board and is Director of LVAAS' Public Relations Committee.

The Trumbower Science Building is building number 5 on the map found at: https://www.muhlenberg.edu/media/contentassets/pdf/about/PrintCampusMap-1.pdf Please see also https://www.muhlenberg.edu/directions/ for help finding the campus. Prospective new members who wish to attend the meeting should email membership@lvaas.org



Peter Detterline's Night Sky Notebook JANUARY 2023

Night Sky Notebook what you see when you look up

> Peter Detterline



Gary A. Becker

Mars' Near Graze Was A Wonderful Holiday

What appeared to be a lump of coal turned out to be a diamond in the rough, but first the coal.

* Conditions had been dreary, damp, and rainy for days, and the National Weather Service showed the entire East Coast socked in with clouds and drizzle along the path of a spectacular grazing occultation of the moon and Mars. My friend Pete and I gave up our plans to drive to a nearby location in Pennsylvania or New York where the northern hemisphere of Mars with its white polar cap could be seen partially disappearing behind the southern limb of the moon. I also cancelled the event for about a half dozen of my students who were interested in viewing the near occultation from the Sky Deck atop the Collier Hall of Science at Moravian University. That is how dire conditions looked. Cloud cover was predicted by the NWS to be 95 percent at the time of the graze with areas of dense fog developing later that evening. * To my complete surprise, the infrared radar showed that cloudiness at 8 p.m. on December 7 was minimal with high, thin clouds present over most of the state. Denser, overcast conditions were still prevalent across the Mason-Dixon line and southeastern PA, where the boundary of a cold front was slowly making its way southward. * Since I had no way of accurately polar aligning an equatorial mount, I decided to keep it simple with my DSLR camera and a telephoto lens mounted to a tripod in anticipation of any clear spots that might develop. Pete also stood by his 11-inch Schmidt-Cassegrain ready to image some 30 miles to my south. Gradually, the sky began to cooperate, becoming mackerel in texture with high altocumulus clouds that allowed quick glimpses of the veiled moon and a reddened Mars surrounded by a colorful lunar corona. * I must have taken a hundred images with only a handful that I saved because of the difficulty

in anticipating a proper exposure due to the scudding clouds. It became more overcast again with two thin levels moving at almost right angles to each other, one set from the east and the other from the north. I didn't realize it until later, but the southbound clouds were revealing the drier air from the cold front beginning to work its way into the area. *

That's when the diamond in the rough vividly appeared next to the encroaching moon.

The ground temperature remained balmy in the 50's, but the sky went through a rapid cleansing and within 15 minutes, thinning puffs of rushing altocumulus were playing hide and seek with the moon, acting as a distinct boundary between clear and mostly cloudy conditions. By the time of closest approach at 10:52 p.m., the clouds had retreated southbound for both Pete and me, and through binoculars, a reddish diamond was nearly in contact with the full moon. * What a glorious sight and a wonderful Christmas gift, I thought. Both Pete and I were able to capture the event in different formats when the moon and Mars were at their closest, less than 40 seconds of arc in angular By midnight, Mars could be discerned distance. visually by placing a finger over the full moon, but that was not the case during the time when the Red Planet was closest to the moon. Binoculars, at a minimum, were necessary. Two hours later, as I finished writing my thoughts for this article, clouds had returned, and the moon and Mars were once again veiled. * For East Coast observers where clouds and precipitation prevent about half of anticipated astronomical events to be seen, this was a nice Christmas treat to an extremely rare astronomical event. Pictures are posted here. Happy Holidays. Ad Astra!

© Gary A. Becker – <u>beckerg@moravian.edu</u> or <u>garyabecker@gmail.com</u> Moravian College Astronomy - <u>astronomy.org</u>; also <u>facebook.com/StarWatchAstro/</u>



Mars' Near Moon Graze, (top image with lunar corona) imaged by Gary A. Becker with a tripoded Canon 80D DSLR camera and a 70-200mm Canon telephotozoomlens with a 2X extender for an effective focal length of 640mm (12.8 power). Images of Mars were shot at F/14, ASA 800 for 1/100th second. Images of the moon were taken at 1/800th second, ASA 800 at F/14. The two images were then combined.



Mars' Near Moon Graze, imaged by Peter Detterline on December 7, 2022 @ 22:59 with a Celestron Edge 11, 2x Powermate, ZWO ASI 482 camera with electronic atmospheric dispersion corrector.



This was Frank Lyter's view of the near graze, captured with a DSLR camera from Kempton, PA. Zoom in on lower right.



Dave Moll made this capture of the near graze from a misty North Whitehall Twp. using a Nikon 1V2 on a tripod.

A Brief History of The Observer

By Sandy Mesics

The Lehigh Valley Amateur Astronomical Society has published one of the finest monthly newsletters continually since 1958. It continues to be one of the premier amateur astronomy publications in the U.S., featuring the talents of our writers, our imagers, and most importantly, our editors. It is to these folks that I dedicate this modest attempt at chronicling this remarkable publication.



ŗ	Winter 1958
	THE LEHIGH VALLEY SATELITTE
-	A Publication for the members of the Lehigh Valley Amateur Astronomical Society
• .	Vol. I No.1
• •	Let us pause for just a moment at the crest of this next rise, and consider what lies in the foot steps of our short journey since Sept. 8, 1957.

The first monthly LVAAS publication was *The Satellite*, which began in 1958. Earl Bodder not only was the editor, but he wrote most of the copy, typed the stencils, mimeographed the copies, and mailed out each edition from 1958 to 1961. Bodder was a master machinist who built many parts for the 6-inch Knecht refractor.



1. L to R: Walter Leight, Ed Gilmore, and Earl Bodder

The "new form" of *The Satellite* appeared in January 1959 and was in a 5-1/2 by 8-1/2-inch format, complete with halftone photographs. This was quite a sophisticated achievement for the time. While this publication was free to members, it was also available as a subscription to non-members for \$1.50 per year! Interestingly, junior members were charged 5 cents a copy but had to pick up their copies in person. Only six editions were published in this format.

The first edition of *The Satellite* featured a column called "The Workshop," that highlighted the efforts of those members who were referred to as "T.N.s" (Telescope Nuts). In March 1959, the newsletter featured the telescope-making accomplishments of Dr. George Knecht, and the next month, the efforts of Coplay telescope maker Joe Frisch were highlighted. Photographs also highlighted the construction progress at South Mountain. "The Observers' Page" featured some drawings of Mars by Rodger Gordon, who was to become a regular contributor to LVAAS publications through the years. The February 1959 edition of *The Satellite* featured the membership list, with 48 regular and honorary

members. Membership lists, complete with addresses and phone numbers, were published annually in the LVAAS newsletter for many years until privacy issues became a concern. The highlight of the May 1959 issue was Ralph Schlegel and his homemade planetarium projector project. When the first meeting was held at the newly completed South Mountain headquarters that same month, The Satellite gave directions to the facility. The June 1959 edition was the last of the small digest size publication.

In July 1959, Earl Bodder, with the assistance of Walter Leight, finished construction of an experimental rotogravure press, and the next two issues had a large 8-1/2 by 11-inch format. However, after those two months, the publication returned to the mimeographed format.



Issues of *The Satellite* from 1959 and 1960 chronicled the progress on the South Mountain headquarters, the formation of the Ladies Auxiliary, and notices of society activities, such as meetings and observing sessions, as well as "The Observers' Corner." These issues were printed on legal size paper. By September 1960, *The Satellite* reported that construction had begun on the workshop addition to the planetarium building. During these years Earl Bodder wrote copy, typed the stencils, mimeographed them, and mailed out all the issues himself. He continued to work untold hours and spent many of his own dollars in building a press that, ironically, was never used. Initially, the printing press was to be installed at South Mountain, in the room under the Knecht Observatory, also known as the Darkroom or Optical Shop. By February 1962, this room was complete, but as far as history records, it was never used as a print shop.

APRIL 1961 Vol. 1 No. 1 THE CESSERVER of the Lehigh Valley Ameteur Astronomical Society APRIL MEETING: April 9, 1961, 7:15 PM at the planetarium building.

Early in 1961 a reorganization of the publications staff took place from which *The Observer* emerged. At that time, the name, *The Satellite* name was to be reserved for a proposed quarterly magazine-type publication that was never actually produced. April 1961 saw the first issue of *The Observer*, now edited by Richard Trumbore. Trumbore served as editor until December 1967, with only a six-month hiatus during which junior member and future NASA scientist Curt Rinsland took over editorial duties. Six years later, *Observer* editor George Maurer wrote of Trumbore, "In reading over his writings recently one cannot help being absorbed by his friendly, engaging, but objective rhetorical style. It was with his writings that *The Observer* achieved its peak of critical editorial guidance, and in my opinion, its finest editions."

Barbara Ference, wife of longtime LVAAS member and former Director Bill Ference, typed every word of *The Observer* since its inception in 1961, and other longtime LVAAS member and former Director George Maurer and his family assisted with distribution. Incidentally, Trumbore was a talented thespian, who in 1969, had a role in "Philadelphia, Here I Come," at the Pennsylvania Playhouse. In June 1961, *The Observer* sported a new format which was to remain the same for many years.

From its inception, *The Observer* featured some regular columns: "With the Editor," "Here and There with the Amateurs," and "Society News." Another regular column included "The Wonderful World of Astronomy," by onetime LVAAS Director Bill Ference, a column that discussed cosmology and monthly observing highlights.

Another regular column was "Observers' Corner," written by Rodger Gordon, a very active observer and commentator. His articles typically featured observing and instrumentation. Gordon continued his regular column for over 30 years, with only two brief interruptions from May 1966 to January 1967, and from September 1980 to July 1982, after which he returned to monthly columns. In 1992, Observer editor Gary Becker commented, "Incidentally, Gordon's writing has improved a lot during the last 30 years, but he still submits all his articles in longhand. Thank goodness it is legible more often than not." Becker also reported that well-known amateur astronomer Norman Sperling pronounced that Gordon's column was the longest continually running column of any amateur astronomical publication written by essentially the same individual. Gordon's style was always opinionated, often pessimistic, sometimes controversial, and occasionally generated rebuttals. *The Observer* chronicled the dedication of the South Mountain Headquarters in September 1963. This event followed six years of construction and improvements to the facility, until it was finally considered complete enough to have a dedication ceremony. On a very lovely early fall day, Dr. Peter Van de Kamp from Sproul Observatory, Armand Spitz of Spitz Planetariums, and Ed Bailey of the Franklin Institute saluted LVAAS and all spoke of our groups' amazing accomplishments.

In May 1964, the Society approved bylaws changes which included the establishment of the publications committee to organize, print and distribute *The Observer*. The chair of the committee would recommend a member to serve as editor for approval by the board at each January meeting. The committee was to supervise all other Society publications.

Following Trumbore's tenure, Ellsworth Machin III, took over as the "very temporary" editor in January 1968 for one issue. He was followed by John "Beau" Jones, then a college student, who edited *The Observer* until he entered military service in July 1968. Jones, an accomplished musician/songwriter, played in several notable bands, including The Limits, Wax, and Jay and the Techniques. He was also a teacher of Transcendental Meditation, and an amateur film maker. Jones provided some poetry, and added some graphic art to the publication, including a one-time "logo" for *The Observer* in April 1968. Beau unfortunately passed away at the age of 63 in September 2010.

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Lehigh Valley Amateur Astronomical Society	

George Maurer, who for a long time had been involved in the production of *The Observer*, became editor in August 1968. During his tenure, more line art was introduced to the publication He wrote a monthly column, "In Focus," that covered Society news and happenings. In 1968, Gary Becker began writing a semi-regular feature about Meteor observing activities.

The first photograph featured in *The Observer* was a full-page picture of LVAAS founder Joe Grady in May 1969, as a tribute to mark his passing. A special supplement in September 1970, also with photographs, paid tribute to Earl Bodder, who pioneered LVAAS publications.



In February 1973, Gary Becker began a 5-1/2-year stint as editor. His debut issue featured a new masthead for the publication which was designed by LVAAS members Ken Mohr and Rae Klahr. It also featured a copyright notice for the first time. Gary brought a playful, humorous touch to the publication, while maintaining excellent articles on society news, astronomical happenings, and, of course, regular columns by Rodger Gordon. In January 1974, the Abrams Planetarium *Sky Calendar* became a regular feature.

Gary was assisted by Mildred Guss, who typed the copy and provided editing skills. Printing was done courtesy of George Maurer and Bethlehem Steel, and mailing was handled by George Maurer. Guss continued typing the newsletter until June 1977, when this job was assumed by Jean Hopkins. Maurer handled mailing until December 1980. In December 1977, *The Observer*

merged with the *Maksutov Club Bulletin*, with Gary Becker editing both publications. In July 1975, *The Observer* increased its circulation to 220 to take advantage of the Postal Service's bulk mail rate. The Society accomplished this by increasing the exchange mailings with other clubs.

Following Becker's tenure, Joseph Schmidt assumed editorial duties. Gary Becker described Schmidt as "a very *unique* and talented individual." Schmidt introduced a new masthead in April 1979, and over the next few issues, the layout and design became more sophisticated, giving the publication a very contemporary look. This was made possible because the Rodale Press now provided printing for *The Observer* on a Xerox 9400 copier rather than a mimeograph. The copier printed on both sides simultaneously, had a reduction and enlargement feature, and a collator.

In August 1979 the LVAAS Board authorized the sale of advertising space in the Observer, provided the advertising did not exceed 10% of the size of the entire issue, and all ads would be printed on the same page. The rate was \$2 per quarter page per issue. Ironically, no ads appeared in subsequent issues. Interestingly, an all-time record was set in the December 1979 issue, when Rodger Gordon had four articles in the Observer, for a total of 10 of the 13 pages in the issue!

In November 1980, *The Observer* sported a new masthead once again. This was done in calligraphy, designed by Karl Monahan, who worked for Rodale Press. Bob Bohm became the circulation manager in March 1981. In May 1981, Bob Wallace became the editor, but his tenure lasted a mere month. According to *The Observer*, the task was more daunting than he had expected. Bill Machose, then the LVAAS Director, assumed the editorial duties. To enlist production help, Bill began the tradition of collating, folding and stapling the issues at the monthly Board of Governors meetings. Charlie Takacs ran off the copies and Lester Herman addressed the issues. Apparently, for a while at least, production resorted to stencils and mimeograph machines. The issues during 1981 were fairly bare bones. Twenty issues of the Observer were produced under Machose's editorship.

In January 1983 Deborah Ettien became the new editor. During her short tenure as editor, the issues were of a simple design and featured a regular "Letters to the Editor" column. Ettien accepted a position at Goddard Space Flight Center in Maryland. Ken Schmidt filled in for one issue, when Helen Rogusky took the helm, and continued until May 1985, when Gary Becker again assumed editorial duties.

To be continued in the next issue of *The Observer*.

StarWatch

2023: A Great Year For Observing

The year 2023 will prove to be an interesting time for viewing the heavens both in the day and at night. The most important event of the year seems obvious, the October annular eclipse visible across the Southwestern US. The East Coast will see a partial solar eclipse, but there is also a summer occultation of Antares. If you enjoy watching meteors, this year could not be better, with the Lyrids (Max., Sun., April 23, 21h EDT-3-day moon), Perseids (Max., Sun., August 13, 03h to 10h EDT—26-day moon), Orionids (Max., Sun., October 22-8-day moon), Leonids (Max., Sat., November 18, midnight-5-day moon), and Geminids (Max., Thurs., December 14, 14h EDT—2-day moon) all visible without any substantial interference by moonlight. The North Taurids-last quarter, South Taurids-new moon and Ursids are also free of damaging moonlight. Then there are the planets which have been visible for months, transiting across the autumnal sky. At present they are beginning to gather in the west after sunset, waiting to play with each other and the crescent moon in the upcoming months. Their interactions will make for some great horizonal astrophotography at dusk. Also, watch out for Venus which will make a spectacular comeback in the spring and summer sky, reaching greatest eastern elongation (visible in the west after sundown) on June 4, setting in the northwest at 11:45 p.m., EDT. In this article, I have emphasized occurrences that are taking place in the day or the evening hours when most people are awake, and generally have enough time to make an observation. * On October 14, 2023 the moon's secondary shadow will bathe the entire continental US, most of Canada, all of Mexico and Central America, and most of South America. However, in the US along a narrow strip of land starting in southwestern Oregon, northern Nevada, south central Utah, diagonally across New Mexico, and near the Mexican border across western and southeastern Texas, enthusiasts will witness a ring of fire as the smaller moon is completely silhouetted against a slightly larger sun. * The Lehigh Valley will witness a partial solar eclipse beginning at 12:05 p.m. with the sun almost 40 degrees above the horizon. Maximum eclipse occurs at 1:20 p.m. with the sun nearly 41 degrees in altitude and about 25 percent of the solar disk obscured by the moon. The partial eclipse will end at 2:36 p.m. with the sun at an altitude of 34 degrees. * The occultation of the moon and first magnitude, red supergiant Antares will happen on the evening of Thursday, August 24. At 10:52 p.m. the unlit southwestern limb of the moon will occult this bright star. There should be enough earthshine still visible on the unlit western half of the first quarter moon to allow it to be glimpsed, slowly sneaking up on the Alpha star of the Scorpion. Short focal length telescopes will almost ensure the earthshine portion of the moon will be seen. Unfortunately, the moon will be only seven degrees above the southwestern horizon when the occultation happens. * The first of many interesting close encounters takes place this week on January 3 with the moon and Mars. About 45 minutes after sundown (5:15 p.m., EST), look to the east for the waxing gibbous moon to be just over 2 degrees from the Red Planet. Binoculars will increase your enjoyment. As the year progresses, look for numerous articles in this column that will follow these wonderful astronomical events. Happy New Year to all. Ad Astra!

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JANUARY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
New Years Day <u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	Full Moon <u>06</u>	<u>07</u>	
Seneral Meeting - 3:00 <u>08</u> PM Muhlenberg	<u>09</u>	<u>10</u>	11	<u>12</u>	13	Last Quarter Moon 14	
15	<u>16</u>	17	<u>18</u>	<u>19</u>	20	New Moon 21	
Deadline for <u>22</u> submissions to the Observer	23	24	25	<u>26</u>	27	First Quarter Moon 28	
LVAAS Board of 29 Governors Meeting	<u>30</u>	31					

FEBRUARY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
			<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	
Full Moon <u>05</u> General Meeting - 3:00 PM Muhlenberg	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	10	11	
Super Bowl Sunday <u>12</u>	Last Quarter Moon <u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	17	<u>18</u>	
Deadline for <u>19</u> submissions to the Observer	New Moon 20	<u>21</u>	22	23	24	<u>25</u>	
LVAAS Board of <u>26</u> Governors Meeting	First Quarter Moon 27	28					

Sky Above 40°33'58"N 75°26'5"W Saturday, January 7, 2023 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 Copyright © 1989 by Jef Poskanzer. **Customize Your Sky at** http://www.fourmilab.ch/yoursky/

2023 LVAAS EVENT CALENDAR

Contributed by Bill Dahlenburg

2023 LVAAS Event Calendar											
	Sundays			Saturday		Multi-Day Weekends	Moon Phase				
	Genera	I Meeting	Board	Astro-	Star	Scouts at	Scouts at				
	time	location	meeting	Imaging	Parties	S. Mountain	Pulpit R.	New	1 st	Full	3 rd
		3:00 PM									
January	8	Muhlenberg	29	no meeting	no meeting		no camping	21	28	6	14
		3:00 PM									
February	5	Muhlenberg	26	no meeting	no meeting		no camping	20	27	5	13
		3:00 PM									
March	12	Muhlenberg	26	no meeting	25		no camping	21	28	7	14
		7:00 PM									
April	2	S.M.	30	22	29			20	27	6	13
		7:00 PM									
Мау	7	S.M.	21	20	27			19	27	5	12
		7:00 PM									
June	11	S.M.	25	10	24			18	26	3	10
		5:00 PM									
July	8	S.M.	30	15	22			17	25	3	9
		7:00 PM									
August	12	Pulpit	27	19	26			16	24	1 & 30	8
		7:00 PM									
September	10	S.M.	24	9	23			14	22	29	6
		7:00 PM									
October	8	S.M.	29	14	21			14	21	28	6
		2:00 PM									
November	12	S.M.	26	11	18			13	20	27	5
		2:00 PM									
December	9	?	17	16	no meeting		no camping	12	19	26	5

July, Aug & Dec are Saturday meetings with rain date on Sunday	NEAF	4/15 - 4/16
Jan, Feb & March meetings are at Muhlenberg College	Mega Meet	5/19 - 5/21
August meeting is at Pulpit Rock	CSSP	6/15 - 6/18
December meeting / Holiday Party (TBD)	Stellafane	8/17 - 8/20
	BFSP	9/15 - 9/17 ??

Publishing images is a balancing act!

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

Put the quality in:

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

But watch the "waistline"!

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

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

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

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