

# The Observer

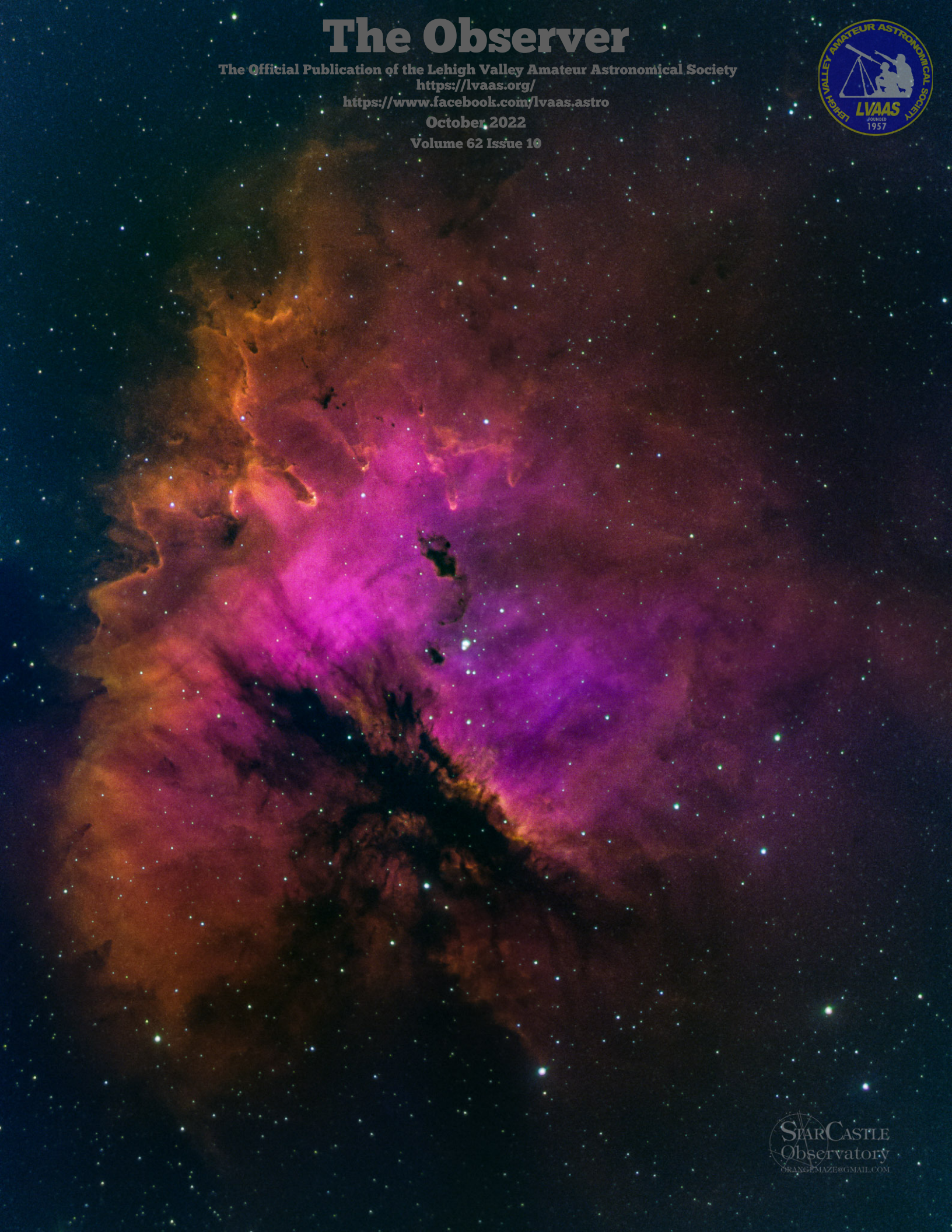
The Official Publication of the Lehigh Valley Amateur Astronomical Society

<https://lvaas.org/>

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

October 2022

Volume 62 Issue 10







## ad astra \*\*\*\*\*

Nominations are now closed for the election of officers. The following persons have been nominated:

Mike Huber - Director

Sandy Mesics - Assistant Director

Blair Hogg - Treasurer

Joe Zitarelli - Secretary

Anyone interested in volunteering to become a director for one of our various committees should contact Mike Huber.

We had a great event on Saturday September 17<sup>th</sup> at the DaVinci Science Center. We did both solar viewing during the day and planetary viewing at night. Six hundred plus visitors attended with a notable rush just before Jupiter and Saturn were visible. DaVinci's plan is to host at least two such events a year. In order to help facilitate this team effort, the LVAAS Board of Governors has approved the donation of one of our many telescopes to DaVinci. Additionally, the DaVinci Science Center has indicated we will be able to have our December Meeting/Christmas Party at their facilities. Further details will be provided when available.

### NASA Eclipse Ambassador Program - 2023 and 2024 Eclipses

NASA is pairing amateur astronomers with undergraduate students to do eclipse outreach and education to off path and underserved communities. Blaine Easterwood, our Education Director, has applied and been accepted into the program. Blaine's next step is to find an undergraduate student to work on this program. So, if anyone is interested, please contact Blaine.

Claudio Stabile has accepted the position of Scouting Activity Coordinator. Please support Claudio in this very important activity.

The next meeting of the Astroimaging group is scheduled for October 15<sup>th</sup>. Anyone interested in Astroimaging is invited to attend.

Ad Astra!

Thomas Duff

# Minutes from the LVAAS General Meeting – September 11, 2022

The September 2022 LVAAS General Meeting was conducted electronically using an on-line service and in person at the South Mountain headquarters. Approximately 45 people were in attendance. Director Tom Duff opened the meeting at 7:04 p.m.

The evening's topic was “Seeing Red: 26 Years of Visual and Near Infrared Photometric Observations of the SRc Red Supergiant Alpha Orionis (Betelgeuse)” presented by Rick Wasatonic.

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

Rick Wasatonic has been both professor and researcher in the Astrophysics and Planetary Science Department at Villanova University since 1996. Prior to that he was the IUE Final Archive Core Data Item Verification System lead at the Goddard Space Flight Center, a Science Operations Specialist at the Hubble Space Telescope Science Institute, and the International Ultraviolet Explorer Telescope Operator at the Goddard Space Flight Center. As an LVAAS member from 1975-1981, Rick conducted photoelectric photometry of eclipsing binary stars using the 20-inch telescope formerly housed in the Schlegel-McHugh Observatory at Pulpit Rock. Rick earned his B.S. in Physics from Wilkes University in 1973. Link directly to the PDF of the paper: [Photometry Paper.pdf](#)

## Membership: Rich Hogg

- 2nd readings
  - John Stefanik
  - Daniel Hutchinson
  - Cheryl Hutchinson
  - Elizabeth Hutchinson
  - Andrew Hutchinson
- 1st readings
  - Ariana Fasci
  - Regina Hlavinka
  - Robert and Rosalie Wild
  - Kenneth Harlan
  - David O’Neill

### Elections – Bill Dahlenburg

- Elections will be held at our next general meeting on October 9, at 7:00 p.m.
- Candidates:
  - Director - Mike Huber
  - Assistant Director - Sandy Mesics
  - Treasurer - Blair Hogg
  - Secretary - Joe Zitarelli

### Pulpit Rock Observatories – Frank Lyter

- Members are encouraged to come out to Pulpit Rock to get trained on the scopes.
- Join the Pulpit Rock Buzz email group to receive email communications.

### Astroimaging – Tom Duff

- The September meeting is canceled.
- The next meeting will be October 15th.

### General Comments:

- The DaVinci Science Center is having a party next weekend with lots of astronomy related activities going on.
  - The hours will be 10am to 9pm.
  - Tickets can be purchased here:
    - <https://www.davincisciencecenter.org/science-under-the-stars/>
- The next Star Party will be October 1st. Please see our website for details.
- NASA National Observe the Moon Day is also October 1st.
- Mike Huber will present "The Moon! Past, Present and Future Missions" at 7:00 p.m.
- We are in need of volunteers to run the activity tables.
  - If interested, please send an email to Mike Huber.

### Next General Meeting:

- The next general meeting will be held on October 9th at 7:00 p.m. LVAAS Secretary Mike Huber will be presenting “Astronomy With Kids.”

The September General Meeting was recorded. The meeting was adjourned at approximately 8:51 p.m

Submitted by LVAAS Secretary Mike Huber



### ***Via Sandy Mesics, Programs Chairperson***

#### Upcoming LVAAS General Meeting Speakers

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

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

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

Please provide contact information to [astrosandy@gmail.com](mailto:astrosandy@gmail.com)

### ***Via Bill Dahlenburg, Star Party Coordinator***

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

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

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

please let Bill Dahlenburg know: [sm\\_maintenance@lvaas.org](mailto:sm_maintenance@lvaas.org)

### ***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>

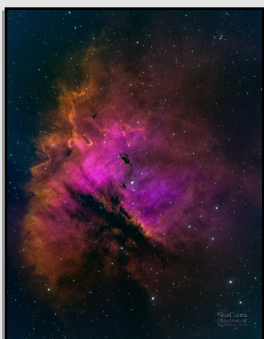
### ***Via Earl Pursell, UACNJ Liason:***

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

### ***Benefit from giving to LVAAS through your IRA***

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

[https://lvaas.org/page.php?page=using\\_rmd\\_to\\_support\\_lvaas](https://lvaas.org/page.php?page=using_rmd_to_support_lvaas)



### **Cover: The Pacman Nebula NGC 281 Imager: Warren Landis**

Mount iOptron CEM120

Imaging Telescope

Celestron 11" SCT

Focuser ZWO EAF

ZWO Filter Drawer

Imaging Camera ZWO ASI2600mm

Guiding Telescope ZWO OAG

Guiding Camera ZWO ASI174-mini

Integration Time

4 hours (Ha 2" ZWO)

16 hours 20 minutes (Sii 2" ZWO)

12 hours 40 minutes (Oiii 2" ZWO)

Total Time

1 day 9 hours

Session dates 8/29 - 9/16 2022

Location: StarCastle Observatory, Allentown PA

**PUBLIC WELCOME!**

**LVAAS General Meeting at South Mountain *and* on Zoom**

**Sunday, October 9 at 7 p.m.**

**"Astronomy With Kids"**

*presented by*

**Mike Huber**

**LVAAS Secretary**



Like many members, I imagine, I joined LVAAS not just because of my interest in astronomy, but to share that interest with my kids. Very quickly I realized that my kids did not always share my sentiment when doing astronomy. However, over the years I learned ways to help pique their interests, and also pitfalls to plan for. I also found other things we can do that are astronomy-related for fun, education, or both, for when the weather, or their moods, are not favorable. For this talk I will go over many 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 has to offer as well.

Michael Huber first began his adventure in Astronomy thanks to his father, now 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 with him all those years ago. He is an accomplished astrophotographer in that he accomplished actually taking an astrophotograph after months of strenuous effort, and many have described him as "ok" at it. He currently serves as Secretary on the LVAAS Board of Governors and is running for Director of the club at our October election. Vote for Mike!

*Prospective new members who wish to attend the meeting should email [membership@lvaas.org](mailto:membership@lvaas.org)*





*Peter Detterline's*  
**Night Sky Notebook**  
October 2022

**Night Sky Notebook**

what you see when you look up



Peter  
Detterline

# The Dumbbell Nebula Imager: Joe Zitarelli



**The Dumbbell Nebula NGC 6853, Messier 27. Imager: Joe Zitarelli**

At a distance of 1360 light-years, this was the first planetary nebula discovered by Charles Messier in 1764. Captured at Pulpit Rock during Mega Meet 2022.

Sky Watcher 100 ED OTA

iOptron 25 CEM Mount

ZWO 1600 MM Pro Camera

LRGB Filters

Lum 25 x 300"

Red 15 x 300"

Green 10 x 300"

Blue 5x300"

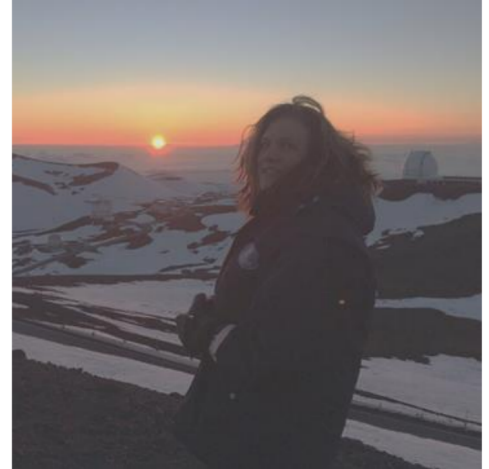


# From the LVAAS Archives: LVAAS Celebrates 15 Years with A Special Guest

by Sandy Mesics

October 1972 marked LVAAS's fifteenth anniversary. The event was held on October 21, 1972, at the Hotel Bethlehem. After a social hour, the group feasted on the famous Hotel Bethlehem roast beef buffet.

Director Dr. Roland Lovejoy was master of ceremonies, and he introduced the many dignitaries and members of other astronomical clubs. In attendance were Mr. & Mrs. William Walter, Miss Eleanor Vadala (see the May 2019 *Observer*) and Edwin Bailey from Philadelphia's Rittenhouse Society, as well as Bob Wright, president of the Astronomical League, and Hubert Harbor, an authority of Mayan astronomy who was then teaching at West Chester State University.



The first part of the program featured a short film made and narrated by LVAAS member George Maurer. This film featured some segments of LVAAS history during the first 15 years, including a Christmas party at the Robson's home in 1963, building the road to Pulpit Rock in 1967, and the telescope fair that was held in September 1972 (See September's *Observer*).



Figure 1. Walter Scott Houston.  
<https://alchetron.com/Walter-Scott-Houston>

The speaker and guest of honor was Walter Scott Houston. Houston had been an English teacher, and at the time of the anniversary banquet he was an editor for American Education Publications. An avid amateur astronomer, he was an active variable star observer, a pioneer in the field of meteor monitoring by radio, and an active participant in Operation Moonwatch in the late 1950's. He is best known for his monthly column in *Sky & Telescope*, "Deep Sky Wonders," which ran from 1946 to 1994 (his final column appeared the year after his death). This collection of columns was published in a book of the same name in 1999.

At the banquet, Houston spoke about meteors and searching for meteor craters on earth. According to *The Observer*, "Mr. Houston ... pointed out the many meteor craters that had been discovered on earth. He remarked that one of the pieces of evidence of a meteor crater is the presence of broken rocks that show pressure cones; small or large conical projections at the surface of their fracture caused by the shock wave of the meteoric impact."

Houston was honored with the 1974 Astronomical League Award. He was honored by having an asteroid, 3031 Houston, named after him. The Northeast Region of the Astronomical League honored him by naming an award after him.

## References

The Observer, November 1972



LVAAS Pulpit Rock Observatories Director Frank Lyter contributes this video of a SpaceX launch as captured from Kempton, PA by his neighbor, Dan Ehrich on September 24 2022 at 7:32 p.m. ET. Below is a pic of the same launch, photographed by LVAAS member, Kyle Kramm from Longwood Gardens, PA.







# StarWatch

## "IDIC: Infinite Diversity in Infinite Combinations"

I believe in diversity. When I was a teenager, I read Madeleine L'Engle's *A Wrinkle in Time*. There is a chapter in her book where the main character is transported to a planet where everyone looks alike—Camazotz. Everyone lived in identical houses and performed identical actions. There were no differences, a stagnant place with which I had no desire to be associated. \* As an adult, I have seen people trying to stereotype others, and our history shows that idea in action. No respect for diversity... \* I welcomed, then in the 60's, *Star Trek*, a forward-thinking drama that celebrated diversity. Each episode showed us different planets, peoples, and customs. It even had a Prime Directive. Don't influence the philosophies and technologies of other worlds. Let cultures be who they are so that they can forge their own destinies. \* If there are other planets with sentient beings inhabiting them, it would be unwise to consider that they would look like us in any way. That is one of the lessons that *Star Trek* taught me. Sentient beings came in all different and unique forms—the Vulcans, Klingons, Borg, Andorians, Bajoran, the Jem'Hadar, Cardassian, Gorn, and the Horta, to name just a very small few. A lot of them were upright, similar to bipedal human beings, but some weren't, like the Gorn (lizards) and the Horta (rocks) and, of course, the Borg (human machines). It is interesting how we accepted them without equivocation when humanity in reality was and still is wrestling with racial, religious, cultural, and sexual orientation issues. These aliens had two broad attributes in common—they were sentient and they were accepted by the

*Enterprise* crew. Consider Captain Kirk and his love addiction to alien women. \* In today's world we have learned that there are some aerial phenomena that we cannot identify—the UFO's (Unidentified Flying Objects) of the 60's have warped into the UAP's (Unidentified Aerial Phenomenon) of today. Their origins are unknown so one of the possibilities that must be considered is that they are alien in nature, visitors from another world, unknowable in their purpose, but apparently for the moment following *Star Trek's* Prime Directive. \* The probability that they came because of the Pioneer plaques or the Voyager records may even be a possibility. After 45 years in space the two Voyager spacecrafts are still beaming data towards Earth. If alien technology has been monitoring us, they will be able to see how our world needs to embrace more diversity. They should have taken the hint from the radio and TV news broadcasts that we have been beaming into space for nearly a century. We are capable of such goodness, but like the Borg, we are also adept at evil too. \* That reminds me of the old bathroom scribble, "Is there any intelligent life on Earth?" Below was the response, "Yes, but we're just visiting." \* At any rate, we can say we are an evolving species, perhaps only going through a Camazotz phase. I truly hope that diversity wins out, and that eventually our humanity will pull together as one giant life force for the preservation of our planet. Gene Roddenberry, who developed *Star Trek* thought we were capable of it, and in the end, he tried to bring his enlightened vision of Infinite Diversity in Infinite Combinations to the rest of humanity. Ad Astra!

Susan B. Becker -- [beckerg@moravian.edu](mailto:beckerg@moravian.edu) or [garyabecker@gmail.com](mailto:garyabecker@gmail.com)  
Moravian University Astronomy - [astronomy.org](http://astronomy.org) also [facebook.com/StarWatchAstro/](https://www.facebook.com/StarWatchAstro/)

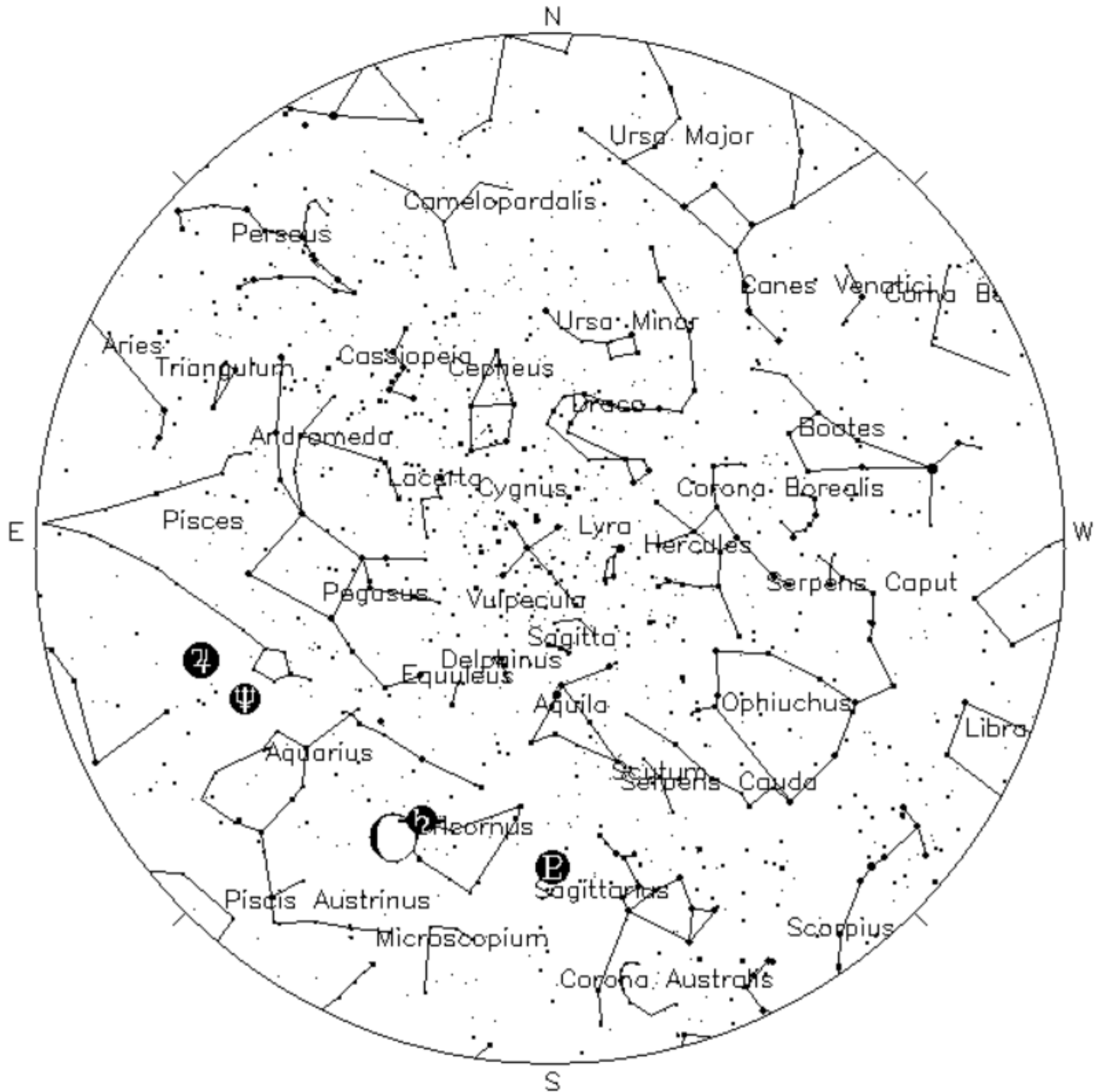
Forward this *StarWatch* to a friend by clicking [Join](#)

# OCTOBER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						Star Party <a href="#">01</a>
<a href="#">02</a>	First Quarter Moon <a href="#">03</a>	<a href="#">04</a>	<a href="#">05</a>	<a href="#">06</a>	Scout Camping at Pulpit Rock <a href="#">07</a>	Scout Camping at Pulpit Rock <a href="#">08</a>
Scout Camping at Pulpit Rock <a href="#">09</a> Full Moon General Meeting - 7:00 PM	<a href="#">10</a>	<a href="#">11</a>	<a href="#">12</a>	<a href="#">13</a>	<a href="#">14</a>	Astro Imaging at SM 7pm <a href="#">15</a>
<a href="#">16</a>	Last Quarter Moon <a href="#">17</a>	<a href="#">18</a>	<a href="#">19</a>	<a href="#">20</a>	<a href="#">21</a>	<a href="#">22</a>
Deadline for submissions to the Observer <a href="#">23</a>	<a href="#">24</a>	New Moon <a href="#">25</a>	<a href="#">26</a>	<a href="#">27</a>	<a href="#">28</a>	<a href="#">29</a>
LVAAS Board of Governors Meeting <a href="#">30</a>	<a href="#">31</a>					

# NOVEMBER

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



*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

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



# 2022 LVAAS EVENT CALENDAR

Contributed by Bill Dahlenburg

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

\* early due to conflicts

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

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

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

## Publishing images is a balancing act!

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

### Put the quality in:

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

### But watch the "waistline"!

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

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

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

*The Observer* is the official monthly publication of the Lehigh Valley Amateur Astronomical Society, Inc. (LVAAS), 620-B East Rock Road, Allentown, PA, 18103, and as of June 2016 is available for public viewing. Society members who would like to submit articles or images for publication should kindly do so by emailing *The Observer* editor, France Kopy, at [editorlvaas@gmail.com](mailto: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.

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