

The Observer

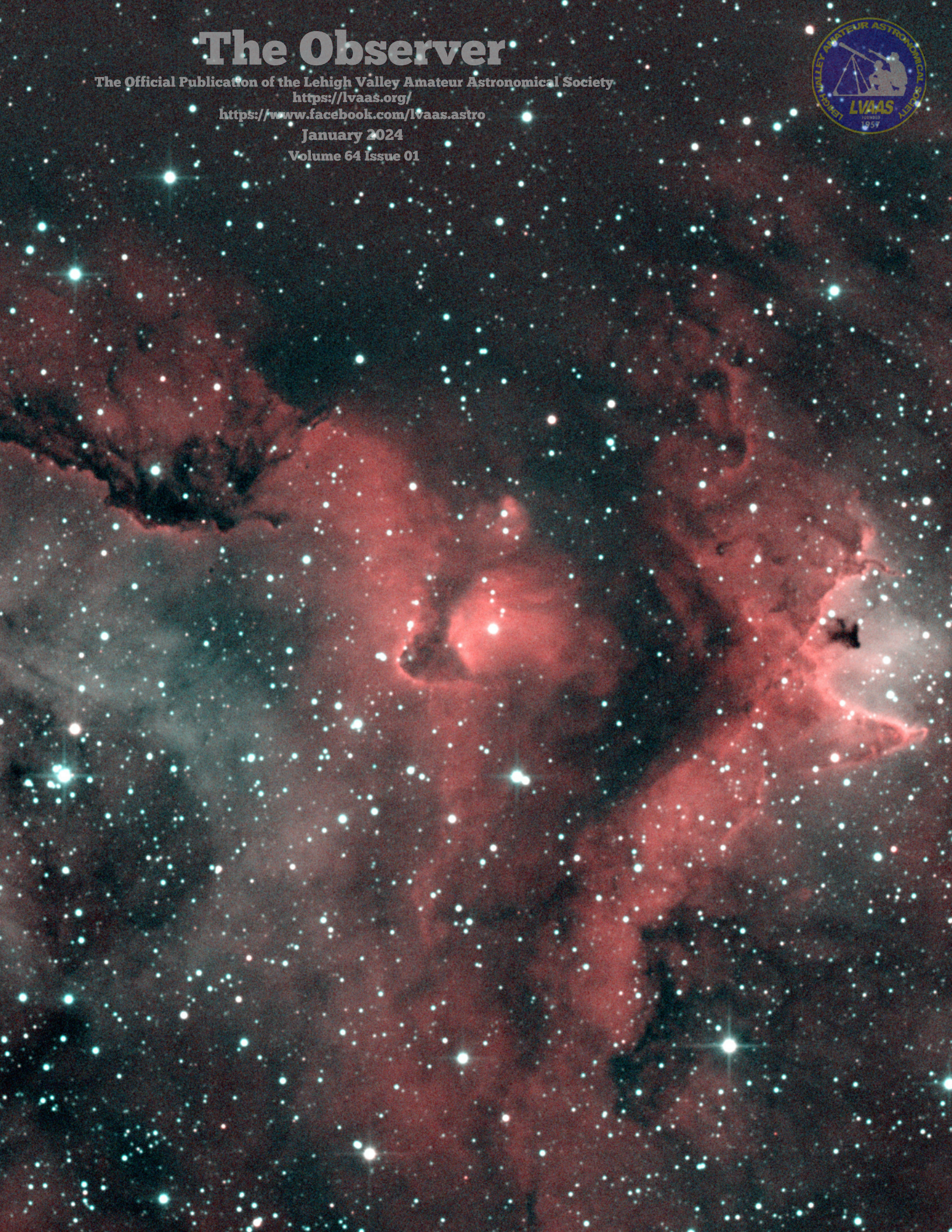
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Ad Astra

Hello everyone, and may the stars shine brightly upon you in this new year!

Reflecting on the remarkable strides made by LVAAS in the past year fills me with excitement for the astronomical adventures that lie ahead. As we bid adieu (mostly) to the challenges faced over the past few years, an outpouring of enthusiasm has rejuvenated our community. Let's harness this celestial energy and propel it into the cosmos!

A heartfelt thank you to Mike Huber for guiding the astronomical ship with dedication and finesse. As I place my hands on the wheel, I do so with both a light touch and a sense of the weighty responsibility borne by Mike and those who came before me. The honor is palpable.

It's now 2024, and as the new years accumulate, the realization of the increment takes a bit longer to fully sink in. I'm also left wondering, where is my flying car? A 21st-century promise yet unfulfilled!

Jokes aside, 2024 promises to be a year brimming with excitement for us. From my first encounter with LVAAS while hiking near Pulpit Rock, the allure of the place captured me. Progress awaits us with the ambitious 40-inch telescope project and the continued rejuvenation of observatories at our beloved site.

In the spirit of embracing new horizons, we're thrilled to announce an expansion of our club's offerings. This includes the addition of a ZWO Seestar S50 telescope to our rental fleet, enhancing our capabilities for astrophotography enthusiasts—both budding and seasoned. This state-of-the-art addition aims to provide a guided and illuminating experience for those venturing into the hobby. Stay tuned for further details on the rental process as we finalize the logistics.

Additionally, we are planning improvements to the WiFi connectivity at South Mountain, ensuring a seamless online experience for our members engaged in astrophotography, computer-assisted astronomy, and collaborative astronomy projects.

In conclusion, while the recent years have tested our mettle, the dawn of a new era beckons with promise. As we stand at the threshold of this month, marking the commencement of a new year, it feels fitting to append a prefix to the title of this column...

Per aspera ad astra! Through hardships, to the stars!

Minutes from the LVAAS General Meeting – December 9th, 2023

The December 2023 LVAAS general meeting was conducted electronically using an on-line service and in person at the Da Vinci Science Center. Approximately 65 people were in attendance.

The meeting started as our Annual Holiday Party at approximately noon. Director Michael Huber opened the informational meeting at 2:00 p.m.

The day's general meeting presentation was "City of Stars". City of Stars is a mostly-walking tour to visit astronomy-related landmarks in New York City. The ceiling of stars at Grand Central Terminal may come to mind, but there are also many hidden treasures not widely known to the public. Each has its own unique characteristics and story. In this virtual tour, Linda Prince guided us through the city to visit a few of these landmarks and told us how it all began.

Taking an astronomy course at a local community college about 30 years ago inspired Linda to buy a telescope, which showed magnificent views of our moon and Saturn. However, after struggling and failing to see many objects that were shown on sky maps from her home on Long Island, NY, she joined an astronomy club for help. That was the beginning of friendships with others in the hobby as well as involvement in public outreach. Now living here in the Lehigh Valley, Linda is thrilled to have found LVAAS, a welcoming club with dedicated members and great resources.

Neil DeGrasse Tyson originally published an article in the January 2002 issue of *Natural History Magazine* entitled "City of Stars" that initially covered 26 astronomy-related items in New York City. Since then, the list has expanded to 46 items that encompasses all 5 boroughs. One of the best known of these is the Ceiling of the Stars in Grand Central Station; however, there are many others, some not as well known. A familiar landmark is the Atlas sculpture at Rockefeller Center. Atlas is shown holding an armillary sphere depicting the punishment that Zeus levied on Atlas to carry the world on his shoulders. Armillaries date back to 200 B.C. The circles on this armillary depict the celestial equator, the ecliptic, and a celestial longitude pointing towards the North Star. The planets are listed on an arc at the base of the armillary where it attaches to Atlas's shoulders with the names of 5 of the planets, excluding the planet Jupiter, perhaps because it was he (also named Zeus) who levied the punishment on Atlas.

The Albertine Bookstore is inside the Payne Whitney House, a city of New York landmark that sits on 5th Avenue between 78th and 79th. Upon entering the marble columned rotunda there is a replica of Michelangelo's Young Archer with the original on loan to the Metropolitan Museum of Art, and the Venetian Room is to the right. To the back is the entrance to the Albertine Bookstore which houses over 14,000 titles from 30 French speaking countries. The upstairs ceiling is done in a night sky and

zodiac motif inspired by ceiling frescos from the Italian Renaissance. The Sun sits in the center and the planets in concentric circles around it. The stars show an ecliptic that includes the symbols for the zodiacal constellations. Also depicted are the Milky Way, a comet, and a myriad of stars.

The exterior of the Church of St. Paul the Apostle on Columbus Ave. shows the Sun's crepuscular rays above the entrance. Inside, the baptistry has gold stars embedded in the tiles. The ceiling depicts a starry night, including Saturn, depicting the sky as it was on January 25, 1885, the night that the church was dedicated.

At Columbia University on 116th St. there is a sundial where only the base remains. Originally there was a sphere made of green granite when the sundial was dedicated in 1910. At noon each day the shadow of the sphere would fall on a scale at the base that would show the day of the year. In 1944 the sphere began to crack and it was removed.

The Dr. Ronald McNair Playground between 122nd and 123rd Streets is dedicated to his memory. He was the second African-American to go into space, and died aboard the shuttle Challenger when it exploded in 1986. The land was acquired in 1986 and the playground was completed in 2006. The park has circular areas depicting the relative sizes of the planets. Jupiter is depicted as a 78' ring of pavement while Pluto is depicted as only 1'. There are also many space-themed play stations, including monkey bars with moon phases and a cratered hemisphere sprinkler.

The News Building on 42nd St. was constructed in 1929 and until 1994 was home to the New York Daily News. In the lobby, designed in the art deco style, is a 12', 4,000-pound globe of the Earth that rotates at a rate of one rotation every 10 minutes. There is a mirror under the globe so visitors can see the bottom of the globe. There are tiers going down to the mirror under the globe with information comparing the size of the sphere to various sizes and distances in space, illustrating the vastness of space. On the walls are names and distances to various cities, weather data recordings, clocks showing the times of day at various cities, and astronomy posters. A model of the lobby was used for The Daily Planet lobby in the original Superman TV series, and in the 1978 movie, scenes were shot in the actual lobby. The building was named a New York City landmark in 1981 and the lobby a National Landmark in 1998.

There are also various sundials and many other objects.

More information can be obtained on the City of Stars web page at:

<https://aosny.org/city-of-stars.html>

or on Facebook at

www.facebook.com/CityofStarsNYC

After questions, there was a break taken at 3:03 p.m.

The informational meeting resumed at 3:23 p.m.

Membership: Rich Hogg

- The following members completed their second readings and are now full members:
Jonathan Adams
Aidan Berger
Bert and Kathy Pochek (family membership)
- The following members completed their first readings:
Raymond and Catherine Ang (family membership)
Chris Matos
- The following members have previously completed a first reading and are still eligible to complete a second reading to become full members:
Dennis Hendershot
Louis Velez

New Officers- Mike Huber

- The officers who were elected to serve at the October 2024 General Membership Meeting were sworn in by Mike Huber. They are:
 - Director - Benjamin Long
 - Assistant Director - Kyle Kramm
 - Secretary - Joe Zitarelli
 - Treasurer - Wojciech “Vo” Maziarz
- Mike Huber thanked all of the officers from this past year for all of their hard work.



Induction of new LVAAS Officers: Benjamin Long (on screen), Vo Maziarz and Joe Zitarelli. . Missing from photo is Kyle Kramm. Photo courtesy of Dave Raker.

Pulpit Rock Observatories – Frank Lyter and Ron Kunkel

- Frank and Ron are available to orient members to our telescopes. Contact either of them if interested.
- Frank has been working with a group to become familiar with the Society's camera and spectrograph. Contact Frank if interested to get involved with this equipment.
- Another member, Steve Walters, has deployed a meteor camera and is now part of the global network.
- Ron gave a word of caution that when there is any snow on the ground, the road up the mountain to Pulpit Rock can be quite treacherous, even in a 4-wheel drive vehicle.

Astroimaging - Tom Duff

- The final Astroimaging meeting of the year will be Saturday December 16 at 7:00 p.m. at South Mountain.

Da Vinci Science Center - Felipe Maldonado

- The target date for opening at the new location in downtown Allentown is May 2024.
- Members who are interested may be given a tour before it opens.

Library - Dave Raker

- After 20+ years of service to the Society, Dave Raker will be stepping down as Library Chairperson. Our sincere gratitude for your years of dedicated service, Dave!

Director Comments - Benjamin Long

- Ben indicated he is looking forward to a very good year and is looking to work on some large projects.

Next General Meeting:

- The next meeting will be held on Sunday January 14, 2024 at 3:00 p.m. at Muhlenberg College.

The meeting was adjourned at approximately 3:55 p.m. The Dec. 2023 general meeting was recorded.

Submitted by Joe Zitarelli, Secretary



2024

Is upon us! Happy New Year!

It's time to renew your LVAAS membership

LVAAS PayPal link: https://www.paypal.com/donate/?hosted_button_id=FBP8Y5VX5QXNW

(remember to add a note with your name, and membership type)

If your information has changed:

Online information update form: <https://form.jotform.com/233314308714147>

Printable form: https://lvaas.org/filemgmt_data/files/LVAAS_Membership_Renewal_Form.pdf

Complete instructions: <https://lvaas.org/page.php?page=Renewing>

Questions? email membership@lvaas.org

Renewals are due by March 1.

New members who joined after October 1st are paid up for 2024.

Regular: \$45

Family: \$65

Junior/Student: \$15

Sustaining: \$90



LVAAS General Meeting

Sunday, January 14, 3 p.m.

Muhlenberg College, 130 Trumbower Hall *and via Zoom*

"Light Pollution: Adverse Effects on Human Health, Glare and the Environment"

presented by

Mario E. Motta, MD, FACC *via Zoom*



There are strong economic and climate-related arguments for use of LED street lighting around the world. However, not all LED light is optimal. Some LED lighting fixtures produce excess blue emission, harmful to both human health and the environment. The problem is with the disruption of circadian rhythmicity through suppression of melatonin production by the pineal gland. Melatonin has been shown to be an important adjuvant to the human immune system, and thus when suppressed has detrimental human health effects. Many white LED street lights have a spectrum that contains a strong spike in the blue wavelength, which is most effective at suppressing melatonin during the night. There is now voluminous data showing a higher risk of hormonally-linked cancers with melatonin suppression. Also, improperly designed lighting fixtures can result in glare, and create a road hazard condition. This can be greatly mitigated by proper design, shielding and installation so that no light shines above 80 degrees from the horizontal. The visual hazard by these very intense point sources is magnified by higher color temperature LEDs because blue light scatters more in the human eye, leading to increased disability glare and has serious implications for night-time driving visibility.

Dr. Mario Motta recently retired from practice at North Shore Medical Center in Salem, Massachusetts. He is a graduate of Boston College, with a BS in physics and biology, and of Tufts Medical School. He is boarded in the American College of Cardiology and of the American Society of Nuclear Cardiology, and is an associate professor of medicine at Tufts University School of Medicine. Dr. Motta has long been active in organized medicine, both in the American Medical Association (AMA) and in the Massachusetts Medical Society (MMS), holding a number of posts through the years. He is a past President of the MMS, and was elected to the AMA council of Science and public Health where he has served 8 years, and elected to the Board of Trustees of the AMA in 2018, recently completing his term.

Dr. Motta also has a lifelong interest in astronomy, and has hand built a number of telescopes and observatories through the years to including his entirely homemade 32 inch F6 relay telescope located in Gloucester, MA. He has been awarded several national awards in astronomy, including the Las Cumbres award from the Astronomical Society of the Pacific in 2003, and also the Walter Scott Houston award from the northeast section of the Astronomical League, and in 2017 the Henry Olcott Award from the American Association of Variable star Observers (AAVSO). He is a past president of the ATM's of Boston, served as a council member and president of the AAVSO. He has been on the Board of the IDA. He has worked on light pollution issues for many years, and published several white papers on LP as a member of the AMA council of science and public health. Finally, he represented the AMA on a UN committee (COPUOS) on light pollution for a worldwide effort to control LP and satellite proliferation. Finally, several years ago the International Astronomical Union awarded Dr Motta an asteroid in part for his work on light pollution as well as amateur research, asteroid [133537MarioMotta](#).

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

Via Sandy Mesics, Programs Chairperson

Upcoming LVAAS General Meeting Speakers

January: Mario Motta will speak on "Light Pollution" via Zoom.

February: Paul Halpern will speak on his new book "The Allure of the Multiverse" and do a book signing.

March: Dave Sobel will speak via Zoom on "The Glass Universe"

* Please contact astrosandy@gmail.com if you have ideas for speakers, or would like to volunteer yourself!

Via Dave Raker, Society Librarian

New Books

To Infinity and Beyond by Neil deGrasse Tyson

On the Origin of Time by Thomas Hertog

The Quantum World by Allison George

Quantum Supremacy by Michio Kaku

The Sun by Ryan French

Interstellar by Avi Loeb

Discovering the Universe by Sten Odenwald

Universe: The Definitive Visual Guide by Martin Rees

New DVD

"City of Stars" ~ Linda Prince

The Observer wishes Dave the very best as he 'turns the page' on his 24 yr. tenure as LVAAS Librarian. He has been a steadfast and shining example of volunteerism. Godspeed, Dave!
-ed.

Via Rich Hogg, Technology Director

Recently, LVAAS member Terry Pundiak spoke about his contribution to meteor research for news station WFMZ. You can read or listen to the article [here](#)

Via France Kopy, Observer Editor

All LVAAS members are welcome and encouraged to contribute material for our newsletter, including photos (astroimages, skyscape or event), original articles of astronomical interest, or advertisements for equipment.

The Observer has a world-wide audience; why not use it to share your love of astronomy? (Please see the black box, last page for specifics on ads.)

Via Earl Pursell, UACNJ Liason

NASA Summer Internship Opportunities, Application deadline Feb 2, 2024

<https://www.nasa.gov/learning-resources/internship-programs/>

Via Earl Pursell, UACNJ Liason

During the off-season (November through March) UACNJ is now presenting an online astronomy-related presentation that begins at 8 p.m. on Saturdays. You can tune in by visiting us at our [YouTube channel](#). To view the program line-up please visit uacnj.org.



Cover Image: IC1871 The Rift in the Soul Nebula Imager: Benjamin Long

Taken with an ASI533MC-Pro on a Celestron 150 F5 Newtonian

Using an Optolong L-Ultimate Ha/Oiii dual band filter

14.5 Hours Integration

Details and Hi-Res:<https://astrob.in/k4qac6>

Education and Outreach News and Opportunities

Our bylaws list the following as our #1 purpose:

“To encourage and promote interest in the study of astronomy and its allied subjects from the amateur standpoint.”



Blaine Easterwood

It is in that spirit that I share the following information.

Amateur Astronomy Lecture Series

Looking for a way to spend a few winter Saturday afternoons? Well, look no further. The Kalamazoo Astronomical Society is hosting a free five-part Introduction to Amateur Astronomy lecture series beginning January 13th at 1PM. The series consists of 5 two hour Zoom sessions held every other Saturday afternoon through March 9th.

This is an excellent series that has something for both the beginner as well as the seasoned amateur. The presentations are both informative and thorough. Attendees will receive a comprehensive set of prepared notes for each session and participants who attend all sessions will receive a certificate of completion! I can't think of a better way to spend a few winter afternoons.

So head on over to the KAS website to register, and mark your calendar so you don't miss this great opportunity!

<https://www.kasonline.org/amastro.html>

Wishing you clear skies and latency free Zoom sessions!

Help Guide Education Programs for LVAAS

Want to help identify and facilitate educational activities and programs? If so, why not join the Education Committee? For as far back as my LVAAS memory reaches, the Education Committee has been a committee of one. I would like to change that and collaborate on ways to enhance our education efforts. This is a great way to help contribute to the society. So bring your ideas and talents to the Education Committee!

Volunteers Needed for April 8th Eclipse Event at the Da Vinci Science Center

Over the years our partnership with the Da Vinci Science Center has grown nicely. The number one reason for this and our successful partnership is the dedication of our volunteers.

Many of us will be traveling to the path of totality for the April eclipse, so staffing this event will likely be more of a challenge than previous events. I will help coordinate this as needed, but will not be able to attend the event on eclipse day.

If you are not traveling and can volunteer at the Da Vinci Center please let me know. The primary activities will be assisting guests with viewing the sun, and sharing your enthusiasm about the wonders of the sky.

We appreciate any time that you can volunteer. So even if it's for only an hour or two, we would love to have your help!

— — — —

Contact me with any questions or to volunteer: blaine@ieee.org or education@lvaas.org

For Sale – Explore Scientific 102mm triplet telescope with Celestron AVX mount/tripod and much more

This is a five year old Explore Scientific 102mm telescope and Celestron AVX mount/tripod system that was lightly used and in excellent condition. It can be used for typical astronomical viewing or for astrophotography [some camera adapters included]. The goto mount can find clusters, nebulae, planets, galaxies, etc. The replacement cost for all the equipment included in this sale is roughly \$3,100 at Skies Unlimited. Asking \$1,895 cash with local pickup in Emmaus, no shipping.

More pictures and/or details upon request.

Included in the sale:

Explore Scientific ED 102 Telescope, 5 mm Cel LX eyepiece, 25 mm Cel LX eyepiece, explore Scientific 2" diagonal, Celestron Powertank Lithium Pro, Celestron AVX mount/tripod, Telescope cover, 8x50 finder scope with reticle.

Please email Mike Waddell if interested: mgwaddx@gmail.com





Peter Detterline's
Night Sky Notebook
JANUARY 2024

Night Sky Notebook

what you see when you look up



Peter
Detterline



StarWatch

Travels with Jesse

I wanted to share with *StarWatch* readers some of the images I recorded on my travels to the Mars Desert Research Station and the annular eclipse of October 14, 2023. I have made a temporary switch, except for my astrophotography, in regards to how I record images. For now, I have put aside my Canon 80D digital single-lens reflex camera for the convenience, portability, and multiple camera lenses of a Google Pixel 7 Pro phone. I plan to visit the mirrorless digital cameras as a major upgrade, but for the moment, the 7 Pro images have provided better color rendition, dynamic range, as well as adequate resolution. * My traveling partner on this trip was Jesse Leayman, a former Dieruff High School student I taught in the 1990s. He now works for Pfizer, one of the world's premier biopharmaceutical companies, giving the nod for whether experimental testing of new drugs may continue or should be scrapped. Jesse also coaches swimming for a local YMCA. You'll find him working at the pool from 5 to 8 a.m., about the time that I'm typically going into REM sleep. I'm not acquainted with anyone who knows the human body's chemistry better than he or is willing to share that information with all who inquire. In addition, Jesse is knowledgeable in many other disciplines, including survival skills, astronomy, languages, and music, to name a few. He is a voracious consumer of knowledge, able to synthesize what he learns into practical applications to improve his life and the people with whom he comes into contact. Jesse needs to write a book. * He and I have traveled at least a half-dozen times together, accompanying me as a chaperon on high school astronomy field experiences and personal archaeoastronomy trips

to the Southwest. We always end up at Chaco Culture National Historical Park near Nageezi, New Mexico, where he and I have volunteered for the National Park Service. It is a place that I am drawn to as if I lived in that location in a previous life. * On this outing, we first journeyed to Colorado, to visit my friend Joe Smith, who lives at 9200 feet in the Sangre de Cristo Mountains west of Pueblo. If you like scenery, try finding a place with a better view—spectacular. * The Mars Desert Research Station near Hanksville, Utah, was our next stop; our purpose, to help refurbish the two observatories, which include the MDRS Robotic facility that Moravian University has a 25 percent timeshare with the Mars Society. We also observed the annular eclipse there. Then it was onto Utah's Hovenweep National Monument via the Colorado River and Valley of the Gods. Hovenweep is one of the less traveled gems of the National Park Service. Here in the late 1200s, Ancestral Puebloans made one of their last stands against a drying climate before migrating to more reliable water sources. * Finally, it was on to Chaco Culture National Historical Park, the capital of the Chacoan Phenomenon which lasted from about AD 850 to approximately 1300. At Chaco, Native Americans built elaborate structures from stone that served as the epicenter for the worship of thousands, particularly around the time of the solstices. Astronomy and the ability to create a calendar played a central role in their success story. I invite you to journey with Jesse and me as we explored these sacred sites, visited MDRS, and observed the annular eclipse. Go [here](#). Happy Holidays. Ad Astra!

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Moravian University Astronomy - astronomy.org

Join

Global Crises and Dark Skies

By Sandy Mesics

Fifty years ago, America was amid an oil crisis. Following the Nixon administration's call for emergency aid to Israel in October 1973, the oil producing countries of the middle east (OPEC) began an oil embargo to the U.S. The price of gas jumped suddenly, and supplies were so limited, that various states began rationing gas based on car license plates or limiting the amount customers could purchase at one time.



The crisis affected almost all activities of daily living: the economy suffered, people installed locks on their car's fuel filler systems, people drove less, resorted to public transportation, or formed carpools, and even overinflating their car tires to reduce friction. The national speed limit was reduced to 55 mph. Interestingly the crisis affected night skies, as mentioned in this paragraph from the Potpourri column in the January 1974 *Observer*:

One good result of the energy crises as noted by several members of the society has been a general improvement of nighttime observing conditions in the Lehigh Valley. Members observing at South Mountain, however, are asked to kindly conserve the heating oil when using the downstairs building to warm up. Once the tank is empty, everyone will be left out in the cold.

In March 1974, a board discussion ensued regarding setting up a carpool system for monthly meetings. At the general meeting that month, Stanley Wilkes changed the Pulpit Rock work party schedule to weekends in the middle of the months, since gas shortages were worse at the beginning and end of each month. The June 1974 Board of Governor's minutes recorded the following: "Ralph Schlegel suggested that more care be taken when members leave the South Mountain building – he found the front door opened and the temperature was up to 70°. It will be mentioned at the General Meeting."

While dues were not increased to meet the heating oil budget, alternative methods of fundraising were implemented, notably a "popular astronomy" course, as well as an end-of-year giving campaign for members. Gradually, beginning in March 1974, the crisis eased: the supply returned, but the prices did not go back to their pre-embargo levels.

Fast forward twenty-seven years: In the immediate aftermath of the September 11, 2001 terror attacks, the Federal Aviation Administration ordered every aircraft in the US to land somewhere, immediately. The Canadians followed as well. Within a few hours, the only aircraft flying were military aircraft. This ban lasted for three days. Without the contrails extending the normal cirrus cloud cover, daytime temperatures rose, and nighttime temperatures were lower. Penn State geography professor Andrew Carleton remarked: "I remember walking to and from my office [during that time] and thinking how incredibly clear the skies were."

While the clear skies in the aftermath of 911 did not last very long: fast forward again to the Covid-19 pandemic of 2020. By March 2020, it is estimated that 1.7 billion people were under

lockdown globally. In the U.S. the quarantine lasted about 5 months. People were either out of work, or worked or attended school from home, resulting in less travel, less gas consumption, better night skies and more free time. Some folks took up amateur astronomy, and they did so at a great time.

According to a 2022 article by Helena Horton, an Environment reporter for *The Guardian*: “Stargazers have been enjoying the best view of the night sky since 2011, as light pollution sharply dropped during the pandemic lockdowns and the levels continue to fall despite restrictions having been lifted. Reasons light pollution has fallen, according to the charity, include households being more conscious about wasting energy due to high prices, and councils reducing street lighting. A continued trend of home working has also caused a reduction in light pollution from offices.”

On the downside, during the summer and fall of 2023, wildfires in Canada caused a considerable amount of smoke in the air that affected air quality in the U.S. In June 2023, *Sky & Telescope* published an article on how and what to observe under smoky skies. Spoiler alert: view the sun, variable stars, and double stars.

If there is a conclusion to be reached, one could say that amateur astronomy is not immune from political, social, economic, or natural crises. Despite the ups and downs, the hobby endures, and to quote Jack Horkheimer, the original “Star Hustler” we just need to “keep looking up!”

References

Greene, Katie. Probing Question: Does commercial jet traffic affect climate? December 4, 2005.

<https://www.psu.edu/news/research/story/probing-question-does-commercial-jet-traffic-affect-climate/>

Retrieved 9/26/2023.

Horton, Helena. Light pollution falling amid soaring energy prices, star survey finds. May 17, 2022. *The Guardian*. Retrieved 12/12/2023.

<https://www.theguardian.com/environment/2022/may/17/light-pollution-falling-amid-soaring-energy-prices-star-survey>

King, Bob. Eking Out Observing From Under Wildfire Smoke. *Sky and Telescope*, June 14, 2023.

Retrieved 12/01/2023.

<https://skyandtelescope.org/astronomy-news/eking-out-observing-from-under-wildfire-smoke/>

The Observer, January 1974.

LVAAS Global Meteor Network Update

Congratulations to **Steve Walters** for the successful installation of his home meteor camera in Albrightsville, PA. Steve's station has been successfully calibrated and is now part of the Global Meteor Network official data stream! His images, time-lapse video and astrometric results can be found at the at following weblog:

<https://globalmeteornetwork.org/weblog/US/US003Y/>

This new camera is now the fourth station in the LVAAS family after **South Mountain**, **Terry Pundiak** in Easton, and **me** in Upper Providence. Timing could not have been better with the upcoming Geminid Meteor Shower on December 13th and 14th. Last year our cameras each captured over 400 meteors during the peak evenings. For more information on the GMN, please see their website at:

[What is the GMN? - Global Meteor Network](#)

The network now has over 500 cameras worldwide used to capture daily meteor flux, discover the debris fields of well know and sometimes long-lost comets, and track the trajectories of fireballs and smaller meteors. In a few cases, the network has been instrumental in tracking meteorites right to the ground. If anyone is interested in building their own camera or would like to have one pre-assembled, please contact **Frank Lyter** or myself. We still have extra parts and components for constructing a station for you at cost. Dark skies are not required, just a decent swath of open sky to position the wide field lens.

Clear Skies and Good Luck to Steve!

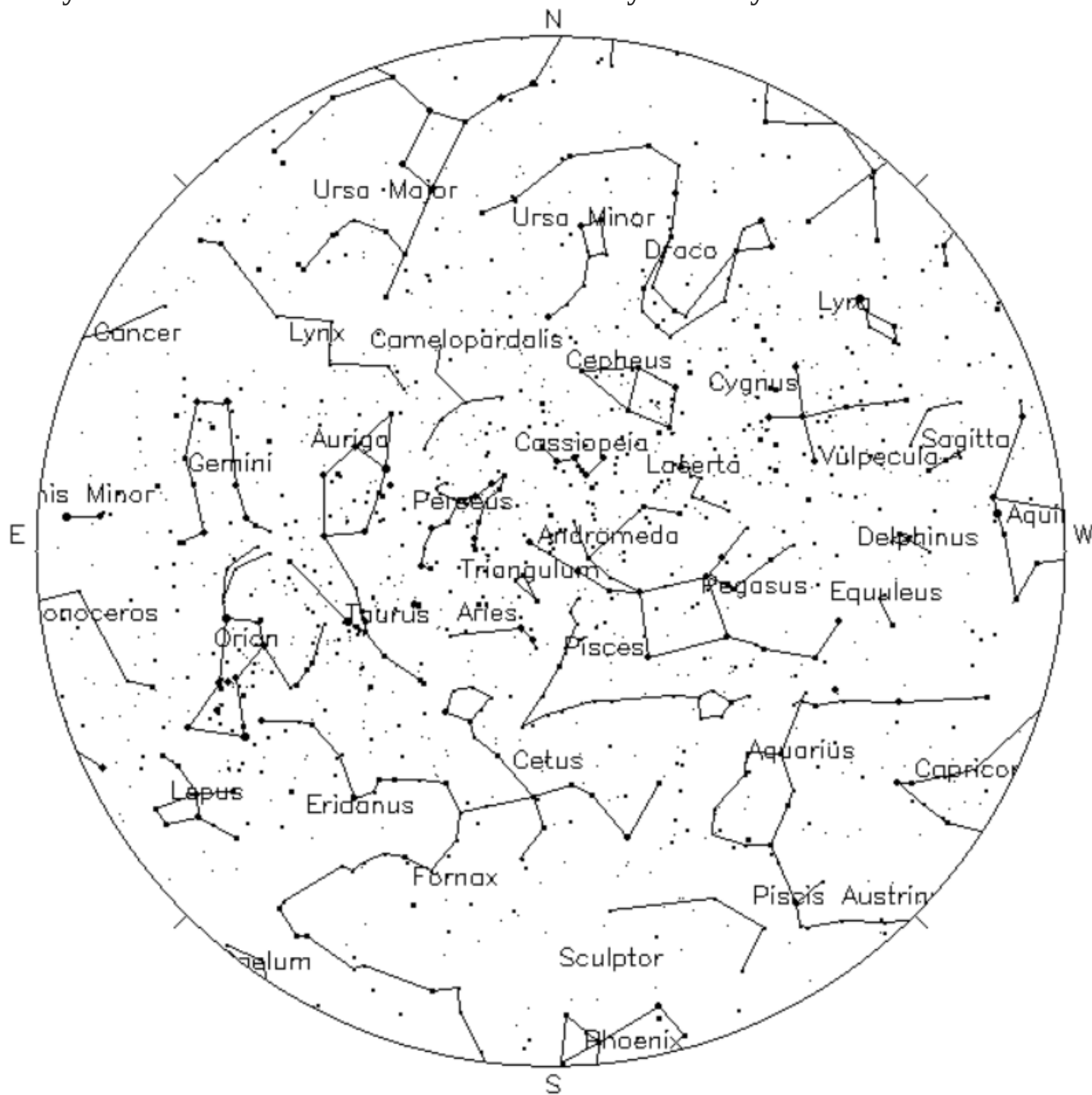
John Kmetz

JANUARY

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

FEBRUARY

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



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/>

2024 LVAAS EVENT CALENDAR

Contributed by Bill Dahlenburg

2024 LVAAS Event Calendar											
	Sundays		Board meeting	Saturday			Observer Submission Deadline	Moon Phase			
	General Meeting time	location		Astro-Imaging	Star Parties	Stargazers Group		New	1 st	Full	3 rd
January	14	3:00 PM Muhlenberg	28	no meeting	no meeting	no meeting	1/21/24	11	17	25	3
February	4	3:00 PM Muhlenberg	25	no meeting	no meeting	no meeting	2/18/24	9	16	24	2
March	10	3:00 PM Muhlenberg	24	no meeting	16	8	3/17/24	10	17	25	3
April	14	7:00 PM S.M.	28	6	13	12	4/21/24	8	15	23	1
May	5	7:00 PM S.M.	19	11	18	10	5/12/24	7	15	23	1 30
June	9	7:00 PM S.M.	30	1 29	15	14	6/23/24	6	14	21	28
July	13/14	5:00 PM S.M.	28	x	20	12	7/21/24	5	13	21	27
August	10/11	7:00 PM Pulpit	25	3 31	17	9	8/18/24	4	12	19	26
September	8	7:00 PM S.M.	29	x	14	13	9/22/24	2	11	17	24
October	13	7:00 PM S.M.	27	5	12	11	10/20/24	2	10	17	24
November	10	2:00 PM S.M.	24	2	9	8	11/17/24	1	9	15	22
December	8	2:00 PM ?	29	7	no meeting	no meeting	12/22/24	1 30	8	15	22

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

NEAF 4/20 - 4/21
 Mega Meet 5/3 - 5/5
 CSSP 6/6 - 6/9
 Stellafane 8/1 - 8/4
 BFSP

October 4-5-6?

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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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.

Every effort will be made to properly credit the sources of the material used in this publication. If additional credit is required, please notify the editor at observer@g.lvaas.org

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