

The **Evansville Astronomical Society (EAS)** is a non-profit organization fully incorporated in the state of Indiana. It has, as its primary goal, the advancement of amateur astronomy. Founded in 1952, the society seeks to:

- 1... maintain adequate facilities for its members and the public in order to extensively study the skies and
- 2... promote an educational program for those who wish to learn more about the science of Astronomy.

Meetings are held the third Friday of each month, except June, when the annual EAS picnic is held. The society also sponsors monthly Open House events during the warmer seasons that afford the public an opportunity to tour the observatory.

EAS 2024 Officers and Contacts

President – Tony Bryan
812.827.3234

evansvilleastro@gmail.com

Vice President – Scott Conner

Secretary – Dave Kube
740.223.6854

Treasurer – Ben Cruce

Counselors
Ken Harris (2022)
Kent Bretton (2023)
Michael Borman (2024)

Webmaster – Michael Borman

Program Director
Chuck Allen

Newsletter editor – Dave Kube
dasiceman@yahoo.com

For more information about the EAS or directions to the Observatory, please visit the club's web page:

www.evansvilleastro.org



Local Events and Information

EAS Update

Please Note: We have a Regular meeting scheduled for Friday, April 19th, 2024 at 7:30pm. This meeting will be held at the Observatory. Please see our Facebook Group and Webpages for Updates.

EAS Update

Please Note: We have a Regular meeting scheduled for Friday, May 17th, 2024 at 7:30pm. This meeting will be held at the Observatory. Please see our Facebook Group and Webpages for Updates.

EAS Update

Please Note: We have Astronomy Day scheduled for Saturday, May 18th, 2024. Place and Time still to be determined. Please see our Facebook Group and Webpages for Updates.

EAS Update

Please Note: We have our annual club picnic and observing session scheduled for Saturday, June 8th, 2024. This is scheduled to be at Ken Harris's home. Please see our Facebook Group and Webpages for Updates

EAS Update

Please Note: We have an Observe the Moon event scheduled for Friday, June 21st, 2024 in the evening. This meeting will be held at the Museum. Please see our Facebook Group and Webpages for Updates.

EAS Update:

Please Note: We have a Regular meeting scheduled for Friday, July 19th, 2024 at 7:30pm. This meeting will be held at the Observatory. Please see our Facebook Group and Webpages for Updates.

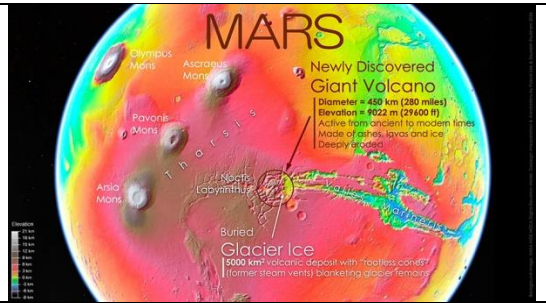
EAS Update:

Please visit our website <http://www.evansvilleastro.org> and our Facebook Group page to keep yourself up to date for any changes.

Telescopes and accessories for sale...

As mentioned in last month's issue, Mike Borman still has some excellent telescope equipment and imaging accessories for sale. Some of the gear has already been sold. If interested, go to Mike's web page. Here is the link: <http://www.mborman.org/forsale.htm>

Giant Ancient Volcano Discovered on Mars.



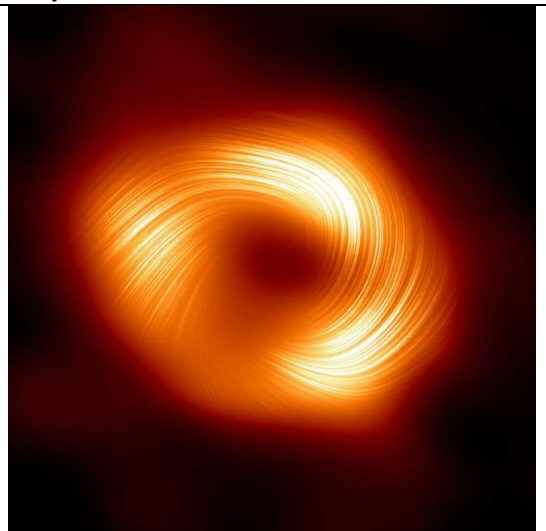
The newly discovered giant volcano on Mars is located just south of the planet’s equator, in eastern Noctis Labyrinthus, west of the Valles Marineris canyon system. The volcano sits on the eastern edge of a broad regional topographic rise called Tharsis, home to three other well-known giant volcanoes: Ascraeus Mons, Pavonis Mons, and Arsia Mons.

Photo Credit: NASA / USGS

It’s not every day that a giant volcano is discovered hiding in plain sight. By reviewing satellite imagery from many missions, scientists have spotted the remains of a colossal volcano on Mars. The volcano, provisionally named “Noctis Mons,” had been imaged repeatedly since the early 1970s, but extensive erosion had concealed it from view. Researchers have also spotted hints at an adjacent glacier buried underneath the volcanic slopes.

Noctis Mons is located near the Martian equator, in the eastern part of the Tharsis volcanic province, sandwiched between the vast canyons of Valles Marineris and the fractured maze-like terrain of Noctis Labyrinthus. “In fact, it is eastern Noctis Labyrinthus that is the volcano,” says planetary scientist Pascal Lee (SETI Institute and the Mars Institute) who announced the finding during the 55th Lunar and Planetary Science Conference in The Woodlands, Texas. The discovery adds yet another landmark to this intriguing region.

Strong Magnetic Fields Swirl Near Milky Way’s Black Hole.



This new image from the Event Horizon Telescope collaboration shows the silhouette of the supermassive black hole in the Milky Way’s center, with lines overlaid that trace the light’s polarization. The polarization reveals details about the strength and structure of magnetic fields close to the event horizon. This is the first time astronomers have been able to measure polarization in detail around our black hole, called Sagittarius A*..

Photo Credit: EHT Collaboration

The polarization detected in Sgr A*’s emission indicates that the magnetic fields in its accretion flow aren’t the tangled mess once expected. Rather, they’re strong, twisted, and orderly, producing a notably strong polarization signal.

Fields like these can control and even choke the gas flowing into a black hole, manipulating the black hole’s diet. They can also serve as a pipeline for outflowing plasma jets. This kind of accretion environment is called a magnetically arrested disk, or MAD. Analysis of the first Sgr A* images had suggested the black hole might be MAD, but the team needed to unpack the polarization data to confirm.

EHT astronomers found signs of a MAD environment around M87*, too. That both black holes would be surrounded by strong, orderly magnetic fields surprised astronomers back in 2022 when the first Sgr A* image came out. These two black holes are seemingly polar opposites: Sgr A* is a quiet, finicky cat lapping from a trickle of gas; M87* is a roaring lion that shoots out plasma jets thousands of light-years long. (In fact, the jet pointing toward us is so prominent that it was discovered in 1918.)

It could be that strong, orderly magnetic environments are a universal feature of the gas skirting supermassive black holes. Theoretically, such fields should also power a jet. Observations have yet to find one from Sgr A*, but data like these raise hopes that a jet exists, even if only a stubby one.

May 2024

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-------------------------|------------------------|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 Reg.Mtg 7:30pm | 18 Astronomy Day |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

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Up and Coming Events 2023

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday April 19th, 2024 @ Observatory.

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday May 17th, 2024 @ Observatory.

Please Note we have our annual picnic on Saturday June 8th @ Ken Harris's home.

Please Note there is an Observe the Moon event on Friday, June 21st, 2024 @ Museum.

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday July 19th, 2024 @ Observatory.

Please visit our Web Page <http://www.evansvilleastro.org> or our Facebook Group Page for updates.
Events may be cancelled due to Covid and/or Weather at time of event.

Moon Phases

| New Moon | First Quarter | Full Moon | Third Quarter |
|---|-----------------------------|-----------------------------|---|
| May 7 th , 2024 | May 15 th , 2024 | May 23 rd , 2024 | May 1 st , 2024 May 30 th , 2024 |
| Moon Phases courtesy of Time and Date.com | | | |

Solar Eclipse 2024 Images

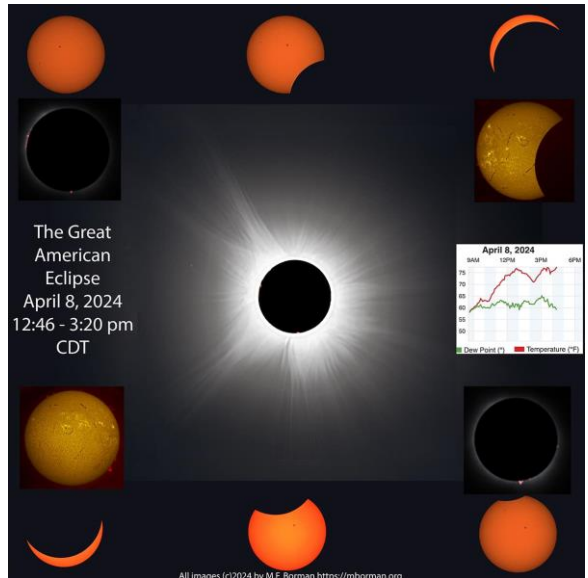


Photo Credits to Kevin Bonges, Dave Kube and Mike Borman

Rev A 02012024

EAS Meeting for March – 2024

President Tony Bryan called the meeting to order at 7:30pm. Board members present were Tony, Scott, Dave and Ben. There were 13 members and 1 guest present. Motion to accept the minutes as printed in the March Newsletter was motioned, seconded and voted in unanimously by the attending members.

Vice President Scott Conner read the following upcoming events.

| | | |
|----------------------------|---------------------------|------------------------------|
| Public Star Watch | Saturday, March 16 | 7:30 PM @ Observatory |
| Observe the Sun | Saturday, April 6 | 11AM - 4 PM @ Museum |
| Total Solar Eclipse | Monday, April 8 | All day @ Museum |
| Public Star Watch | Saturday, April 13 | 7:30 PM @ Observatory |
| Regular Meeting | Friday, April 19 | 7:30 PM @ Observatory |

Treasurer Report –

Ben Cruce reported that finances are still good. Reports that our State Farm insurance was paid @\$2819.15 and the Electric bill was down some from the previous months.

Old Business

Special Projects Status –

Bathrooms: Numerous eclipse activities and observatory maintenance work have and will continue to interfere with the planned completion of the bathrooms. Completion date pushed back to May at the earliest.

Telescope Mount: Scott Conner reported that Dave Kube, Tony Bryan assisted him with mounting the new 7” refractor and 8” cassegrain. There still needs to be some alignment done with all 3 scopes.

Nature Study Group Tour – We hosted a Nature Study Group from Mount Carmel, IL on March 9th. There were 16 visitors were provided a presentation “The Wonders of the Night Sky & Constellations”, a tour of the observation floor, and views through our C-14. Tony gave the presentation. Scott and Dave handled all the observation tasks in a very professional manner. We received a donation of \$105 from the group

NEW BUSINESS

Eclipse Activities – We are still receiving requests for presentations and interviews ahead of the upcoming April 8th Total Solar Eclipse. If anyone hears of a request, or would like to give or assist with a talk, please let us know.

Completed Eclipse Presentations –

Report from Tony: - Since our last meeting, Tony has given eight Eclipse presentations at regional libraries and other venues. Namely, Pike County Public Library, Huntingburg Public Library, Washington Carnegie Public Library, Ferdinand Dome, Dubois Library, Ferdinand Library, Alexandrian Public Library in Mount Vernon, and the Jasper Library. Thanks go out to Dave Kube and Donna Bryan for assisting with these presentations as their schedules allowed. Tony also stated we received \$650.00 in donations for these events.

Report from Ken: - Ken stated that he still has a few presentations later this month and early April. All donations have been given to our treasurer Ben Cruce.

First PSW of 2024 – Our first PSW of 2024 will be March 16th. If you have never assisted with a PSW, please consider doing so. PSW’s are a great opportunity to meet others interested in astronomy, and likely you will learn something new along the way. Please request volunteers for this PSW & record volunteer names.

Second PSW of 2024 – Our second PSW of 2023 will be before our next monthly meeting and that PSW will be April 13th. Scott, Matt and Dave volunteered to work this event.

EAS OBSERVER NEWSLETTER

Observe the Sun – On Saturday April 6th, the EAS will be at the Evansville Museum with telescopes set up for solar viewing. The event takes place from 11:00 AM to 1:00 PM. The full event last until 4:00 PM. A ton of stuff is going on that day including free planetarium shows. Afterwards, for those interested, we will go out to eat and socialize (going Dutch, each person participating covers their own expenses).

Eclipse Day at the Museum – The Museum is having a private eclipse even on Monday April 8th. Tony will be there and have telescopes set up for viewing from 11:00 AM to 1:00 PM. He will also be participating in a panel discussion from 12:30 PM to 1:00 PM. If you are interested in helping that day please see Tony prior to March 22nd so that arrangements can be made (parking passes, security, and lunch tickets) that allow your entry.

Library Telescope Status – The library scope awarded to the EAS by the Astronomical League arrived, items required to ruggedize the scope and eyepiece arrived, and all modifications of the scope are complete. We will be presenting the telescope to the Dubois Public Library, and providing a tutorial on its operation to the library staff on April 24th at 6 PM EDT. The library is in the process of printing the users guides emailed to them and ordering a recommended book that will check out with the scope. Anyone interested in coming along for that activity are invited. Please let Tony know if you are planning to do so.

ANNOUNCEMENTS

Next Monthly Meeting - Our next regular meeting is scheduled for 7:30 PM on April 19th at the Observatory.

Member Announcement – EAS member Kevin Bonges desires to share a YouTube Channel he finds interesting. On YouTube, search for “dr becky astrophysicist” channel. There you will find all kind of astronomy related videos.

EAS Merchandise – 3” round iron-on / sew-on cloth patches with the EAS logo have been received and are available for purchase while supplies last. These will look great on a shirt, vest, or coat, and will bring attention to your society whenever you have it on. Cost for members is \$9.00 each.

Quick Meeting for Executive Board –There was a quick stand up meeting of the Executive Board in the office area after our meeting. A discussion included a large telescope donation and do we want to pursue.

Tonight’s Program – Chuck Allen was our speaker for the night.

ADJOURN MEETING

Meeting was adjourned @7:55pm by president Tony Bryan.

Respectfully Submitted – Dave Kube – Secretary