

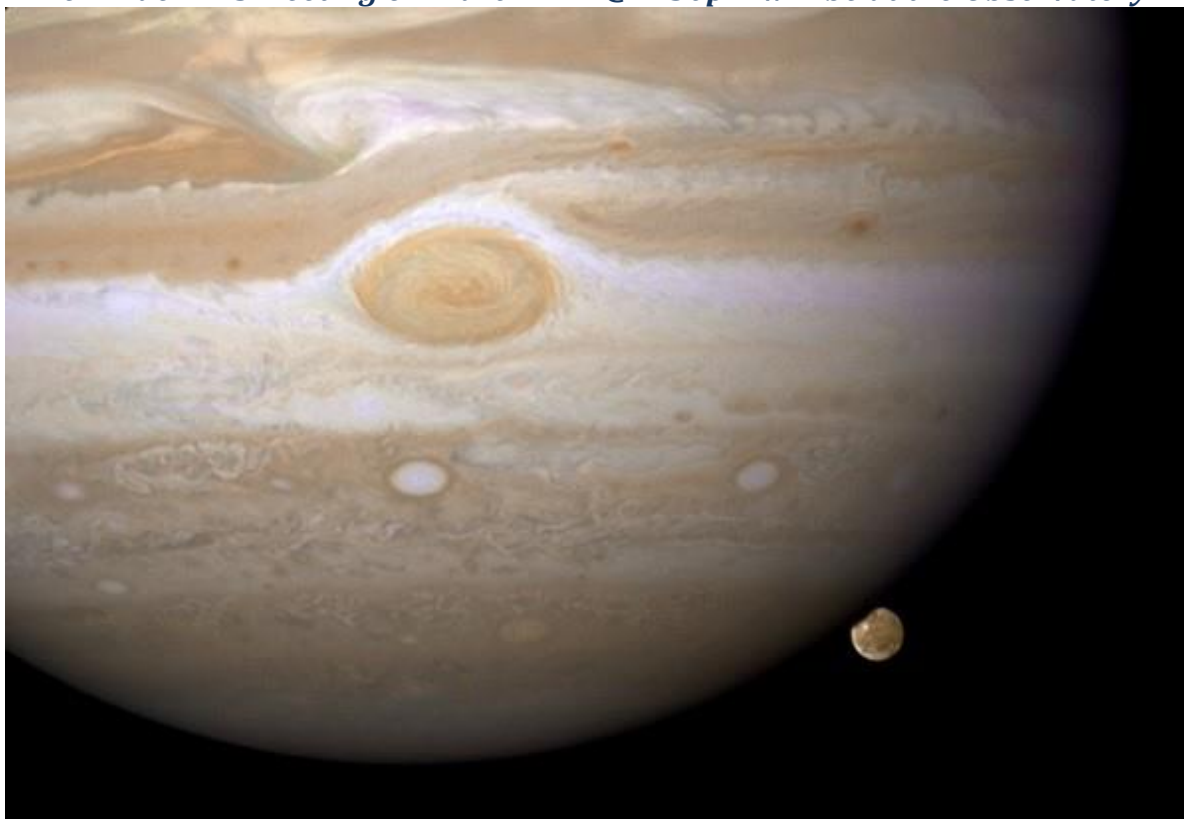
Observer

EVANSVILLE ASTRONOMICAL SOCIETY, INC.

March
2023

The solar system's largest planet is once again the world with the most moons, as a dozen newly confirmed satellites put it ahead of Saturn.

Reminder EAS Meeting on March 17th @ 7:30pm will be at the Observatory.



In 2019, Saturn captured the title of the planet with the most moons, after astronomers announced the ringed planet hosts 82 circling satellites. (That number was further bumped up to 83 in 2021.) Jupiter now has 92 confirmed moons with orbits published by the International Astronomical Union's Minor Planet Center. This includes 12 newly announced moons, half of which were first spotted around Jupiter within the past two years. The 12 new jovian moons are enough for the king of planets to rightfully reclaim its title as king of satellites as well.

Photo Courtesy: NASA, ESA and E. Karkoschka (University of Arizona)

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The EAS newsletter, Observer, is published monthly. Anyone wishing to contribute articles or photos may mail them to the club's PO Box: EAS, PO Box 3474, Evansville, IN 47733, or e-mail them to the editor at:

dasiceman@yahoo.com

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 2023 Officers and Contacts

President – Tony Bryan
812.827.3234

evansvilleastro@gmail.com

Vice President – Scott Conner

Secretary – Dave Kube
740.223.6854

Treasurer – Mitch Luman

Counselors
Michael Borman (2021)
Ken Harris (2022)
Kent Bretton (2023)

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 7:30pm on Friday, March 17th, 2023. This meeting is scheduled to be at the Observatory. Please see our Facebook Group and Webpages for Updates .

EAS Update

Please Note: We have a Regular Meeting scheduled for 7:30pm on Friday, April 21st, 2023. This meeting is scheduled to be at the Observatory. Please see our Facebook Group and Webpages for Updates .

EAS Update

Please Note: We have a PSW scheduled for 7:30pm on Saturday, April 22nd, 2023. This meeting is scheduled to be at the Observatory. Please see our Facebook Group and Webpages for Updates.

EAS Update

Please Note: We have our Astronomy Day Event scheduled for 12-4pm and 7:30-9:00pm on Saturday, April 29th, 2023. This event is scheduled to be at the Museum. Please see our Facebook Group and Webpages for Updates

EAS Update

EAS Update:

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

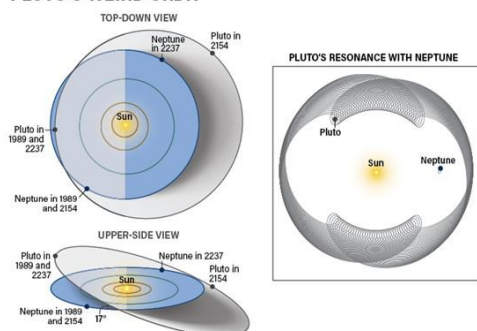
Telescopes and accessories for sale...

Orion AstroView120ST, Equatorial Refracting Telescope and accessories. 120mm (4.7") aperture and 600mm focal length, includes sturdy adjustable-height tripod, equatorial mount, finder scope and an internal polar alignment scope. Includes two Plossl 1.25" eyepieces (25mm and 10mm), 6x30 finder scope, star diagonal. \$600.

Contact: Karen Caruso 812-629-8089 (cell)

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>

Will Pluto and Neptune ever Collide?**PLUTO'S WEIRD ORBIT**

While in two-dimensional space it may appear that Neptune and Pluto's orbits intersect, the planets are never in the same place at the same time.

Photo Courtesy: Astronomy: Roen Kelly

With Pluto spending 20 years of its 248-year orbit within the orbit of Neptune, you might expect that at some point, the two worlds could catastrophically collide. However, Pluto and Neptune never actually pass through the same three-dimensional point in space because Pluto's elliptical orbit is tilted 17° to the ecliptic. But what about in the future?

Pluto's orbit experiences two effects that keep the dwarf planet safe: Its point of closest approach to the Sun oscillates in the vertical direction and also in the radial direction. These orbital effects are called latitudinal libration and azimuthal libration, respectively.

Latitudinal libration always puts Pluto high above Neptune's orbit during their closest approach to each other. And azimuthal libration ensures Pluto never crosses Neptune's orbit within 90° of the ice giant.

Scientists create new form of ice that might exist on Ocean Moons.

The "medium-density amorphous ice" has never been seen before. But researchers think it might be present on ocean moons like Jupiter's Europa.

Photo Courtesy: NASA/JPL-Caltech/UCLA/MPS/DLR/IDA

The set-up for creating a never-before-seen form of ice, known as medium-density amorphous (MDA) ice, involved pulverizing ultracold crystalline ice with small steel balls.

Chemists have discovered a new form of ice, and their work may have major consequences for our understanding of the outer solar system.

We usually encounter three forms of water on the surface of Earth: solid, liquid, and vapor. On our planet, solid ice mainly comes in one variety, where water molecules arrange themselves into an orderly and repeated crystalline structure. But scientists have discovered 19 other varieties of water-ice that may appear throughout the universe.

One class of ice does not rely on repeated structures at all. This is called amorphous ice. And scientists have known for decades of two kinds, called low-density and high-density amorphous ice.

But recently, a team of chemists took an extremely simple experimental setup and created an entirely new form of amorphous ice, which they called medium-density amorphous (MDA) ice.

April 2023

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

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Up and Coming Events 2023

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday March 17th, 2023 @ Observatory.

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday April 21st, 2023 @ Observatory.

Please Note we have a PSW scheduled for 7:30pm on Saturday April 22nd, 2023 @ Observatory.

We have our Astronomy Day Event at the Museum scheduled for 12-4pm on Saturday April 29th.

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

Moon Phases

New Moon	First Quarter	Full Moon	Third Quarter
April 1 st , 2023	April 9 th , 2023	April 16 th , 2023	April 23 rd , 2023
Moon Phases courtesy of Time and Date.com			

NATIONAL ASTRONOMY DAY IS APRIL 29

Article Submitted by Mitch Luman

In what has become one of our “premier” events National Astronomy Day will take place on Saturday, April 29 from Noon - 4:00 p.m. This year’s event will be scaled down a bit from what we’ve offered in the past, however there will still plenty going on. As in year’s past, we’ll be partnering with the Evansville Museum of Arts, History and Science for what promises to be another memorable celebration. This will be the final Astronomy Day orchestrated by Mitch Luman, as he prepares to retire from his post at the Museum beginning in July.

What Is Astronomy Day? All amateurs should set aside one day each year to share our excitement and enthusiasm about astronomy. During the day we hope to share astronomy with many people, including those who may be looking through a telescope for the first time.

Volunteers Are Needed. We need volunteers for our afternoon viewing of the Sun and the Moon and our evening star watch on the Museum’s front steps. Contact mluman@emuseum.org if you can help. Volunteers are needed to assist with the following activities:

Daytime Telescope Viewing, Make-It-Take-It Activities for Kids, Balloon Drop
An Indoor Telescope Display, Evening Telescope Viewing

BRING YOUR TELESCOPE FOR THE INDOOR TELESCOPE DISPLAY !



Library Telescope Presentation Photos



EAS Meeting for February – 2023

Our February meeting at the Evansville Museum was officially called to order @ 7:34pm by president Tony Bryan. Officers in attendance were Tony Bryan, Mitch Luman and Scott Conner. There were 11 members present. We had 5 visitors for a total of 16 present.

Reading of minutes from our January meeting was motioned by Scott Conner and Seconded by Bob Flater to be accepted as printed in the February 2023 EAS Observer Newsletter. Motion was carried by all members present.

UPCOMING EAS EVENTS

Scott Conner announced our upcoming events.

Regular Meeting	Friday, Mar 17	7:30 PM @ Observatory
Regular Meeting	Friday, Apr 21	7:30 PM @ Observatory
Public Star Watch	Friday, Apr 22	7:30 PM @ Observatory
Astronomy Day & Moon Watch	Saturday, Apr 29	2:00-4:00 & 7:30-9:00 PM @ Museum

OLD BUSINESS

Library Telescope Status – The library scope awarded to the EAS by the Astronomical League arrived on January 13th. A month-long shipping delay occurred for an item required to ruggedize the scope and eyepiece. Modifications are now complete. Donation of the scope to the Chandler Library will take place in the next few weeks.

Super Saturday at Evansville Museum – On January 28th, SSA Tony Bryan participated in the Museum's Lunar Super Saturday. Mike Borman set up a very nice rocket display and Donna Bryan manned our EAS outreach table. Thanks go out to Amanda Scurry for loaning a large number of display and activity items that were used that day. Participants learned moon facts, played "Moon Jeopardy", collected rocks on the "moon", learned about the latest NASA missions, and we celebrated the Lunar New Year together. An estimated 175 people attended.

Eclipse Regional Meeting – On February 8, Mitch Luman, Amanda Scurry, Matt Merlo, and Tony Bryan attended a planning and activities meeting in Evansville for Eclipse 2024. The meeting had an estimated 75 participants. Bottom line up front, this thing is going to be big and well planned. After the meeting, Tony spoke with Jodi

Keen, managing editor of Evansville Living magazine. They may be publishing information and dates for our PSWs in an upcoming addition.

Other Old Business – Ken Harris attended an eclipse meeting in Fairfield, IL. There were about 30 participants with plans moving forward.

NEW BUSINESS

Amazon Smile – For the past several years, we have received income from purchases made by members on Amazon Smile. That program is ceasing February 20, but purchases made by then can still generate income for us.

Donations for the Observatory – At the January Planning Session, a few items were identified as being needed at the observatory. The items were; remnant carpet and vinyl for the observatory office and meeting hall stage, and storage lockers. Mitch Luman led the task of finding businesses willing to donate items. Carpet Depot in Evansville donated the carpet and vinyl. Mitch also located a metal storage cabinet for us. Amy Barrett donated three school type lockers. Tony picked up the carpet and vinyl on February 8th, and dropped it off at the observatory. He will pick up the lockers on or before April 11th.

Lynnville Park Meeting – Mitch & Tony will be attending the February 21st Lynnville Park meeting. We plan to discuss our upcoming events at the observatory and give a short presentation about preserving the night sky.

Other New Business – Scott Conner reported he is preparing the parts for the mounts and hopes to install them in March.

ANNOUNCEMENTS

Next Monthly Meeting - Our next regular meeting is scheduled for 7:30 PM on March 17th at the Observatory. Do not come here on that evening, but do please consider supporting this fine venue by becoming a member at the Student, Basic, Patron or Donor Level Membership.

Tonight's Program – Mitch Luman will be our host for the remainder of the evening.

ADJOURN MEETING

Meeting was adjourned by President Tony Bryan

Respectfully Submitted with Meeting Notes from Ken Harris– Dave Kube – Secretary