

# Observer

EVANSVILLE ASTRONOMICAL SOCIETY, INC.

January

2023

*Remembering Apollo 17, which Blasted off for the Moon 50 years ago.*

*Reminder EAS Meeting on January 20<sup>th</sup> @ 7:30pm will be at the Evansville Museum.*



It's been a half-century since humans last set foot on the Moon. But Apollo 17 served as a fantastic swan song for the ambitious program. Apollo 17 was the third mission to the Moon to feature the Lunar Roving Vehicle — a lightweight electric vehicle that helped Apollo astronauts drastically extend the range of their moonwalks

*Photo Courtesy: NASA*

## Inside this Issue...

- 2 – Local Events and information
- 3 – News around the Globe
- 4 – Calendar
- 5 – Astronomy Word Game
- 6 – EAS Business

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](mailto: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](mailto: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](mailto:dasiceman@yahoo.com)

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

[www.evansvilleastro.org](http://www.evansvilleastro.org)



## Local Events and Information

### EAS Update

Please Note: We have a Regular Meeting scheduled for 7:30pm on Friday, January 20<sup>th</sup>, 2022. This meeting is scheduled to be at the Evansville Museum. Please see our Facebook Group and Webpages for Updates.

### EAS Update

Please Note: We have a Regular Meeting scheduled for 7:30pm on Friday, February 17<sup>th</sup>, 2022. This meeting is scheduled to be at the Evansville Museum. Please see our Facebook Group and Webpages for Updates.

### EAS Update

Please Note: We have a Regular Meeting scheduled for 7:30pm on Friday, March 17<sup>th</sup>, 2022. This meeting is scheduled to be at the Evansville Museum. Please see our Facebook Group and Webpages for Updates.

### EAS Update

### 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>

***James Webb helps shed light on black holes and star formation.***



*By cutting through obscuring dust, the new infrared observations are helping astronomers unravel the intricate mysteries of star formation and black hole growth.*

*NGC 7469, a spiral galaxy that hosts a bright active galactic nucleus (AGN) and is bursting with star formation, was a recent target of the James Webb Space Telescope.*

*Photo Courtesy: ESA/Webb, NASA & CSA, L. Armus, A. S. Evans*

The James Webb Space Telescope (JWST) recently snapped this shot of a spiral galaxy sporting a tightly held ring of bright, budding stars, as well as a highly active galactic core powered by a supermassive black hole.

Located some 220 million light-years away in the constellation Pegasus the Winged Horse, the galaxy, NGC 7469, is one of four merging luminous infrared galaxies (LIRGs) astronomers are targeting as part of Early Release Science program #1328. This program aims to explore the complex, feedback-driven relationship between black hole growth and star formation.

Although NGC 7469 has been extensively studied in the past, JWST's infrared vision lets researchers peer through the galaxy's dense dust clouds like never before. The new imaging reveals 66 star-forming regions within NGC 7469, nearly half of which went unseen in previous Hubble observations.

According to an ESA release, these star-forming regions are largely concentrated in a "starburst ring" tightly wrapped around the galaxy's core. The ring has a diameter of just 3,200 light-years, while the galaxy itself is some 90,000 light-years wide. (The six spikes radiating from the galaxy's core are imaging artifacts known as diffraction spikes — a result of JWST's mirrors and design.)

***How asteroids lost their planethood.***



For 150 years, scientists considered asteroids to be planets. What made them reconsider?

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

It's been over 16 years since the International Astronomical Union (IAU) changed the definition of a planet to exclude Pluto, igniting a controversy that rages on today. With the icy world struck from planetdom, there are now officially eight planets in our solar system.

But in 1850, astronomers actually counted 20 planets in the solar system. 13 of them were asteroids, newly discovered denizens of the region between Mars and Jupiter. And the number of asteroids — and, therefore, planets — kept rising for decades.

In fact, for more than 150 years, most astronomers routinely referred to asteroids as planets in their published papers.

So, are asteroids a sub-category of planets or their own separate thing? And what happened? When and why did scientists banish asteroids from the ranks of the planets?

One thing is clear: Asteroids don't meet the recent redefinition of a planet. The 2006 IAU definition requires planets to be large and spherical, and to "clear the neighborhood around their orbits." In contrast, most asteroids are lumpy and irregular in shape, and orbit in the asteroid belt with their brethren.

The consensus that asteroids are not planets dates to more than 50 years before the 2006 IAU definition. But pinpointing exactly why astronomers changed their mind is not as obvious as it might seem.

## February 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<br>Mtg.<br>7:30pm<br>Museum | 18  |
| 19  | 20  | 21  | 22  | 23  | 24                             | 25  |
| 26  | 27  | 28  |     |     |                                |     |

Generated by [FreeHTMLCalendar.com](http://FreeHTMLCalendar.com) Copyright © 2011 John Dalbey.

### Up and Coming Events 2022

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday January 20<sup>th</sup>, 2022 @ Museum.

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday February 17<sup>th</sup>, 2023 @ Museum.

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday March 17<sup>th</sup>, 2023 @ Museum.

Please keep eye out for 2023 schedule.

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                    |
|--|---------------------------------|----------------------------------|----------------------------------|
| February 1 <sup>st</sup> , 2023  | February 8 <sup>th</sup> , 2023 | February 16 <sup>th</sup> , 2023 | February 23 <sup>rd</sup> , 2023 |
| <a href="http://www.evansvilleastro.org">Moon Phases courtesy of Time and Date.com</a> |                                 |                                  |                                  |



# FIND THE TERMS USED IN OBSERVING

FIND MORE THAN 30 TERMS USED BY AMATEURS IN THEIR OBSERVATIONAL WORK. WORDS RUN RIGHT TO LEFT BACKWARDS, UP AND DOWN AND DIAGONALLY. ONLY 10 LETTERS DO NOT BELONG TO SOME WORD YOU ARE SEEKING. THE LETTERS THAT ARE LEFT OVER HOWEVER SPELL OUT THE NAME OF ONE OF THE GREATEST STATES IN THE UNION....

|   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S | Y | F | W | P | C | A | S | S | I | N | I |
| A | A | I | O | I | R | C | A | P | S | C | C |
| L | R | L | O | T | N | H | R | O | L | O | C |
| T | E | T | C | O | M | A | S | T | E | P | Y |
| A | P | E | R | T | U | R | E | L | U | E | A |
| I | P | R | W | A | E | T | O | R | N | R | D |
| S | N | E | V | D | R | S | K | W | H | I | N |
| L | D | O | N | A | T | I | O | T | S | W | A |
| I | N | I | N | A | N | R | I | C | T | S | I |
| A | F | S | T | J | C | N | X | I | A | T | L |
| R | I | M | E | T | E | O | R | X | R | O | U |
| T | I | M | E | Z | F | L | I | N | T | P | J |

## ***EAS Meeting for December – 2022***

Our December 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 Dave Kube. There were 9 members present. We had no visitors present.

Reading of minutes from our November meeting was motioned by Ken Harris and Seconded by Randy Chapman to be accepted as printed in the December 2022 EAS Observer Newsletter. Motion was carried by all members present.

### **UPCOMING EAS EVENTS**

Dave Kube announced our upcoming events.

|                        |                       |                         |
|------------------------|-----------------------|-------------------------|
| <b>Regular Meeting</b> | <b>Friday, Jan 20</b> | <b>7:30 PM @ Museum</b> |
| <b>Regular Meeting</b> | <b>Friday, Feb 17</b> | <b>7:30 PM @ Museum</b> |

### **SPECIAL PROJECTS**

Special projects will continue to be worked while the observatory is shuttered for the winter season.

### **OLD BUSINESS**

**Election of Officers** – At the November EAS Meeting we held election of officers to serve in 2023. Elected officers are as follows: President-Tony Bryan, Vice President – Scott Conner, Treasurer – Mitch Luman, Secretary – Dave Kube. Kent Brenton was elected for the open counselor position..

### **NEW BUSINESS**

**Meeting Costs** - We have the museum reserved for our January and February meetings. The rental for the Museum is \$75 for each night. Holding meetings here in these months ensures nobody will have issues with navigating the hill leading to the observatory during inclement weather and gives us an opportunity to utilize and enjoy this beautiful facility. Ken Harris and Scott Conner have graciously made donations that offset the rental charge for tonight. If any member desires to sponsor us for an upcoming meeting and cover a portion or all of the cost of rental, the Society will appreciate your generosity. Please contact any EAS officer to do so.

**2023 Planning Session** – Each year, Officers and Councilors of the EAS meet early in the year to establish our calendar of events, and take care of other planning and business functions. The meeting normally takes about two hours. This year the meeting will take place sometime during the third or fourth week in January.

**Astronomical League Bylaws** – The Astronomical League is revising their bylaws. A summary of those changes was emailed to our membership on December 12<sup>th</sup>. Please follow the instructions in the email if you desire to make comments on any of the revisions.

**Passing of Lifetime Member** – Lifetime Member Ray Ubelhor passed away on October 29<sup>th</sup>. His family made a \$100 donation to the EAS in his memory. Disposition of donation: open floor for discussion & motion. Tony Bryan suggested a Moon Globe

**Other New Business** - Does any member present have any business to discuss this evening?

### **ANNOUNCEMENTS**

**Next Monthly Meeting** - Our next regular meeting is scheduled for 7:30 PM on December 16<sup>th</sup> at the Evansville Museum. Mitch Luman will be our Quizmaster for the evening.

**Tonight's Program** – Mitch Luman provided us a show call the Hot & Enegetic Universe.

**ADJOURN MEETING** Meeting was adjourned at 7:45pm

Respectfully Submitted – Dave Kube – Secretary