

## *August 2023 Guest Speaker - 2023 National Young Astronomer Award winner, León Garcia*



*Photo Courtesy: Astronomical League*  
*The title for this presentation is "Dark Matter and the Study of Dark Matter Haloes."*

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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](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: Please Note: We have a Regular meeting scheduled for Friday, August 18<sup>th</sup>, 2023 at 7:30pm. Please see our Facebook Group and Webpages for Updates.

### EAS Update

Please Note: We have a PSW scheduled for Saturday, August 19<sup>th</sup>, 2023 at 7:30pm. Please see our Facebook Group and Webpages for Updates.

### EAS Update

Please Note: We have a Moon Watch scheduled for Saturday, August 26<sup>th</sup>, 2023 beginning at 8:00pm at Evansville Museum. Please see our Facebook Group and Webpages for Updates.

### EAS Update

Please Note: We have a Regular meeting scheduled for Friday, September 15<sup>th</sup>, 2023 at 7:30pm. Please see our Facebook Group and Webpages for Updates.

### EAS Update

Please Note: We have a PSW scheduled for Saturday, September 23<sup>rd</sup>, 2023 at 7:30pm. 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.

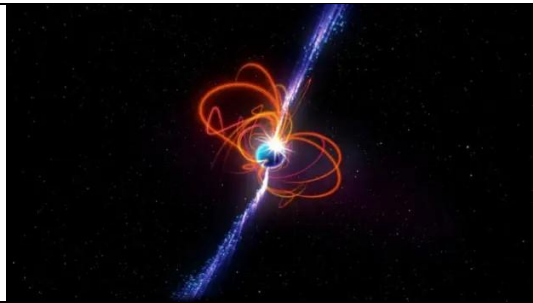

### Telescopes and accessories for sale...

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>

<p>A rare, mysterious radio source is stumping Astronomers</p>	<p>In 1988, radio telescopes picked up a transient signal from 15,000 light-years away within the constellation Scutum. But it remained unnoticed for three decades. Fast-forward to today: Astrophysicists have recently rediscovered the object to find that its source may be a magnetar — a rare type of neutron star with a powerful magnetic field that sends energy into space as it spins. Named GPM J1839-10, this star displays behavior unlike any previously noted.</p> <p>All other known magnetars have speedy periods ranging from a few seconds to a few minutes. But the newly discovered object produces powerful five-minute-long bursts of radiation every 21 to 22 minutes, making it by far the most extended-period magnetar ever detected.</p>
 <p>The strange object sending slow radio signals might be a magnetar - a highly magnetic, rotating neutron star.</p> <p>Photo Credit: ICRAR</p>	<p>The discovery raises questions about the evolution and formation of magnetars and may help researchers understand mysterious occurrences like fast radio bursts, which are also thought to arise on magnetars.</p>
<p>Probing the mysteries of neutron stars with a surprising earthly analog</p> 	<p>Ever since neutron stars were discovered, researchers have been using their unusual properties to probe our universe. The superdense remnants of stellar explosions, neutron stars pack a mass greater than the Sun's into a ball about as wide as San Francisco. A single cup of this star matter would weigh about as much as Mount Everest.</p> <p>These odd celestial bodies could alert us to distant disturbances in the fabric of spacetime, teach us about the formation of elements, and unlock the secrets of how gravity and particle physics work in some of the most extreme conditions in the universe.</p> <p>"They're at the center of a lot of open questions in astronomy and astrophysics," says astrophysicist Vanessa Graber of the Institute of Space Sciences in Barcelona.</p> <p>But to accurately interpret some of the neutron stars' signals, researchers must first understand what goes on inside them. They have their hunches, but experimenting directly on a neutron star is out of the question. So scientists need another way to test their theories. The behavior of matter in such a superdense object is so complicated that even computer simulations aren't up to the task. But researchers think they may have found a solution: an earthly analog.</p>
<p>Though some neutron stars can be detected by the pulses of radiation they emit, the mysterious inner workings of the stars are near impenetrable. Physicists hope to learn more about the nature of these superdense stellar corpses by experimenting with analogous materials in labs on Earth.</p> <p>Photo Credit: NASA's Goddard Space Flight Center Conceptual Image Lab</p>	

## September 2023

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

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### Up and Coming Events 2023

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday August 18<sup>th</sup>, 2023 @ Observatory.

Please Note we have a PSW scheduled for 7:30pm on Saturday August 19<sup>th</sup>, 2023 @ Observatory.

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Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday September 15<sup>th</sup>, 2023 @ Observatory.

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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
September 25 <sup>th</sup> , 2023	September 3 <sup>rd</sup> , 2023	September 10 <sup>th</sup> , 2023	September 17 <sup>th</sup> , 2023
<a href="http://Moon Phases courtesy of Time and Date.com">Moon Phases courtesy of Time and Date.com</a>			

***EAS Meeting for July – 2023***

I was not able to attend the July Meeting and therefore not able to take any minutes.

Therefore, I am omitting minutes from the newsletter at this time.

Respectfully Submitted – Dave Kube – Secretary