

# Observer

EVANSVILLE ASTRONOMICAL SOCIETY, INC.

February

2023

*The AstroRad vest, which offers astronauts protection from the impacts of space radiation, was recently tested by crew members on the ISS.*

*Reminder EAS Meeting on February 17<sup>th</sup> @ 7:30pm will be at the Evansville Museum.*



“Astronauts are exposed to ionizing radiation with effective doses in the range from 50 to 2,000 Milli-Sievert,” according to NASA. This amount is equivalent to 150 to 6,000 chest X-rays. That’s why crew members on the International Space Station (ISS) recently spent several weeks testing a new radiation-blocking garment designed to help combat the toxic effects of space radiation.

*Photo Courtesy: NASA*

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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  
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Vice President – Scott Conner

Secretary – Dave Kube  
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Treasurer – Mitch Luman

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Ken Harris (2022)  
Kent Bretton (2023)

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Chuck Allen

Newsletter editor – Dave Kube  
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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, 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

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### 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...

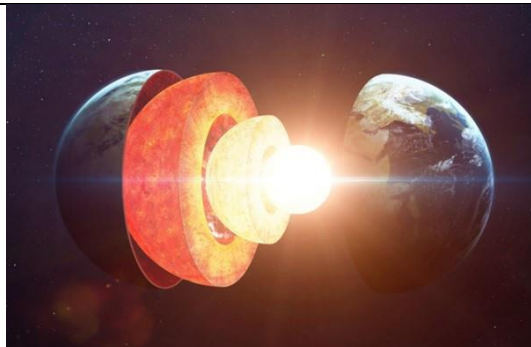
Orion AstroView120ST, Equatorial Refracting Telescope and accessories. 120mm (4.7") aperture and 600mm focal length, includes sturdy adjustable-height tripod, equatorial mount, finder scope and an internal polar alignment scope. Includes two Plossl 1.25" eyepieces (25mm and 10mm), 6x30 finder scope,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

***Strange twist: Earth's inner core may be changing its spin direction.***



*A new study says Earth's inner core is spinning at a slower rate, but what does this actually mean?*

*Photo Courtesy:  
Vadim Sadovski/Shutterstock*

Earth's core has long been a place of mystery to scientists. The core of our planet sits just over 1,800 miles below the surface and exists as a ball of seething hot metal, specifically iron and nickel. It possesses many unique qualities — including its own spin.

Now, researchers at Peking University in China have released new findings about Earth's inner core: its spin rate has slowed. Here are three things you need to know about their study, as well as what the results mean for us on the surface.

1. The inner core's rotation may be slowing down and reversing course.
2. These findings may suggest a larger pattern at work.
3. No, the world isn't ending.

***AI is helping hunt for extraterrestrial life — and it's found 8 strange new signals.***



AI's ability to identify 'technosignatures' missed by classical algorithms is an exciting step forward for radio astronomers.

AI-based systems are being increasingly used to classify signals found in massive amounts of radio data, helping speed-up the search for alien life.

*Photo Courtesy: Generated by DALL-E 2*

AI algorithms do not "understand" or "think." They do excel at pattern recognition, and have proven exceedingly useful for tasks such as classification – but they don't have the ability to problem solve. They only do the specific tasks they were trained to do.

So although the idea of an AI detecting extraterrestrial intelligence sounds like the plot of an exciting science fiction novel, both terms are flawed: AI programs are not intelligent, and searches for extraterrestrial intelligence can't find direct evidence of intelligence.

Instead, radio astronomers look for radio "technosignatures." These hypothesized signals would indicate the presence of technology and, by proxy, the existence of a society with the capability to harness technology for communication.

For our research, we created an algorithm that uses AI methods to classify signals as being either radio interference, or a genuine technosignature candidate. And our algorithm is performing better than we'd hoped.

Technosignature searches have been likened to looking for a needle in a cosmic haystack. Radio telescopes produce huge volumes of data, and in it are huge amounts of interference from sources such as phones, WiFi and satellites.

Search algorithms need to be able to sift out real technosignatures from "false positives", and do so quickly. Our AI classifier delivers on these requirements.

## March 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 Reg.Meeting 7:30pm	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

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### Up and Coming Events 2022

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
March 2 <sup>nd</sup> , 2023	March 10 <sup>th</sup> , 2023	March 18 <sup>th</sup> , 2023	March 25 <sup>th</sup> , 2023
<a href="http://www.evansvilleastro.org">Moon Phases courtesy of Time and Date.com</a>			

***EAS Meeting for January – 2023***

I was not able to attend the monthly meeting on Friday January 20<sup>th</sup> and have no minutes to report.