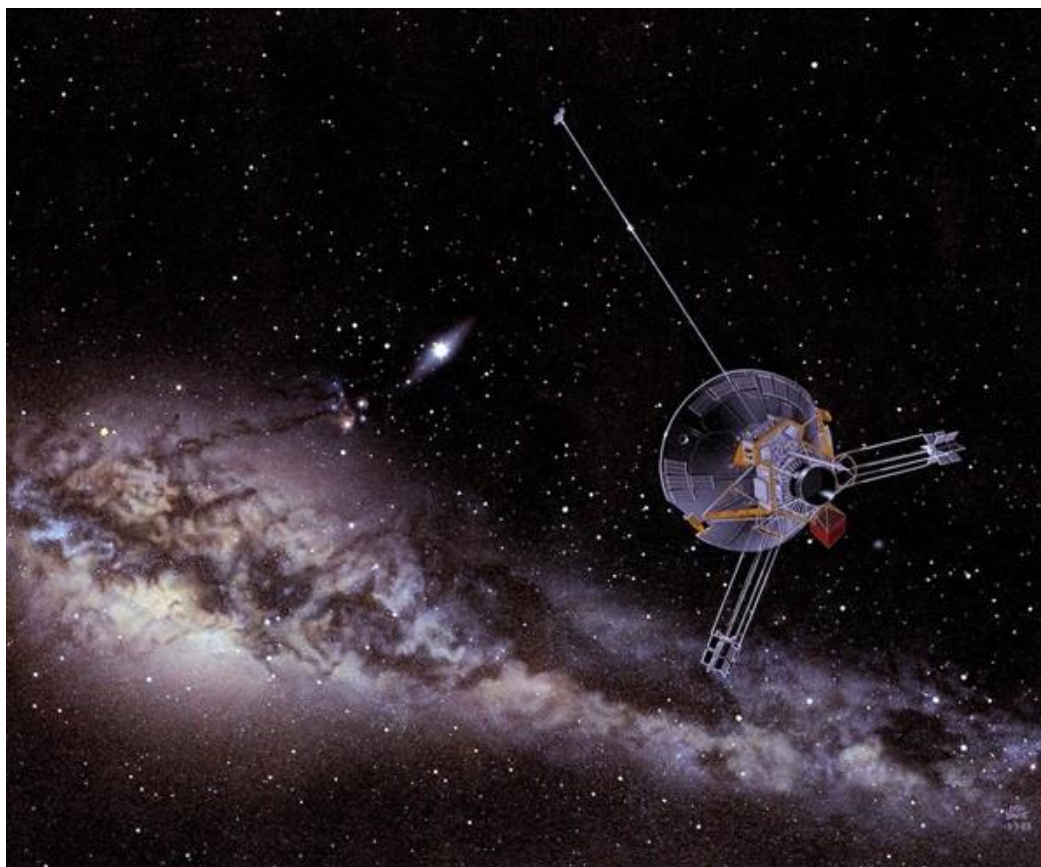


50 years ago, Pioneer 11 set sail for the Outer Solar System



Pioneer 11 is just one of five spacecraft currently on a trajectory that will take it out of the solar system. And in some 4 million years, this robotic emissary from Earth, which sent its final transmission nearly 20 years ago, will silently pass near the star Lambda Aquilae, located some 125 light-years away in the constellation Aquila the Eagle.

Photo Courtesy: NASA/Don Davis

Inside this Issue...

- 2 – Local Events and information
- 3 – News around the Globe
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- 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

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, May 19th, 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, May 20th, 2023. This event 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, June 10th, 2023. This event is scheduled to be at the Observatory. Please see our Facebook Group and Webpages for Updates.

EAS Update

Please Note: We have our Annual Club Picnic Scheduled for June 17th, 2023 at Ken Harris's Home beginning at 6:00pm. Please see our Facebook Group and Webpages for Updates.

EAS Update

Please Note: We have a Moon Watch scheduled for 8:00pm on Saturday, June 24th, 2023. This event is scheduled to be at the Museum. 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>

Building telescopes on the Moon could transform astronomy.



The current race to the Moon is opening up opportunities for lunar astronomy. The farside of the Moon is an attractive place to carry out astronomy.

Photo Courtesy: NASA/Ernie Wright

Lunar exploration is undergoing a renaissance. Dozens of missions, organized by multiple space agencies — and increasingly by commercial companies — are set to visit the Moon by the end of this decade. Most of these will involve small robotic spacecraft, but NASA's ambitious Artemis program, aims to return humans to the lunar surface by the middle of the decade axes.

There are various reasons for all this activity, including geopolitical posturing and the search for lunar resources, such as water-ice at the lunar poles, which can be extracted and turned into hydrogen and oxygen propellant for rockets. However, science is also sure to be a major beneficiary world into orbit, allowing it to coalesce into a moon.

The Moon still has much to tell us about the origin and evolution of the solar system. It also has scientific value as a platform for observational astronomy.

Several types of astronomy would benefit. The most obvious is radio astronomy, which can be conducted from the side of the Moon that always faces away from Earth.

The lunar farside is permanently shielded from the radio signals generated by humans on Earth. During the lunar night, it is also protected from the Sun. These characteristics make it probably the most "radio-quiet" location in the whole solar system as no other planet or Moon has a side that permanently faces away from the Earth.

JUICE spacecraft launches on mission to explore Jupiter's icy moons .



Europa, Ganymede, and Callisto harbor potential subsurface oceans — and life. Soon, JUICE will show them as never before.

Photo Courtesy: Spacecraft: ESA/ATG medialab. Jupiter: NASA/ESA/J. Nichols (University of Leicester). Ganymede: NASA/JPL. Io: NASA/JPL/University of Arizona. Callisto and Europa: NASA/JPL/DLR

Dominating the planets with its bulk, mighty Jupiter offers key insights into the formation of our solar system. And its three large icy moons have long sparked curiosity, not necessarily for their frozen surfaces, but for what potentially lies beneath: liquid water oceans that may even be capable of hosting life.

On Friday (April 14) at 7:14 A.M. CT, the European Space Agency's JUpiter ICy moons Explorer (JUICE) set sail on a mission to investigate these icy moons. The spacecraft, carried atop an Ariane 5 rocket, lifted off from a spaceport in French Guiana, beginning its voyage to the gas giant's neighborhood Planet today.

JUICE will arrive at Jupiter in July 2031. Once there, it will spend several years studying deep-frozen Europa, primordial Callisto, and giant Ganymede, determining how they formed and how they fit within the wider jovian system .

June 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10 PSW 7:30pm
11	12	13	14	15	16	17 EAS Picnic 6:00pm
18	19	20	21	22	23	24 Moon Watch 8pm- Museum
25	26	27	28	29	30	

Generated by FreeHTMLCalendar.com Copyright © 2011 John Dalbey.

Up and Coming Events 2023

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday May 19th, 2023 @ Observatory.

Please Note we have a PSW scheduled for 7:30pm on Saturday May 20th, 2023 @ Observatory.

Please Note we have a PSW scheduled for 7:30pm on Saturday June 10th, 2023 @ Observatory.

Please Note we have our Annual Club Picnic scheduled for Saturday June 17th, 2023.

Please Note we have a Moon Watch scheduled for 8:00pm on Saturday June 24th, 2023 @ Evansville Museum.

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
June 28 th , 2023	June 7 th , 2023	June 14 th , 2023	June 20 th , 2023
Moon Phases courtesy of Time and Date.com			

Astronomy Day April 29th, 2023



Photos from 2023 Astronomy Day Event at the Evansville Museum
Photos Courtesy: Dave Kube

EAS Meeting for April – 2023

Meeting was called to Order by Vice President Scott Conner @7:34pm. The reading of the minutes from the March 2023 meeting was motioned to be accepted as printed in the April 2023 Newsletter by Ken Harris and 2nd by Randy Chapmen. The motion was passed by a unanimous vote. There were 8 members present including Vice President Scott Conner and Secretary Dave Kube . We had one past member Jason Thatcher rejoin and was also present.

Vice President Scott Conner announced our upcoming events.

Public Star Watch	Saturday, Apr 22	7:30 PM @ Observatory
Astronomy Day & Moon Watch	Saturday, Apr 29	12:00-4:00 & 7:30-9:00 @ Museum
Regular Meeting	Friday, May 19	7:30 PM @ Observatory
Public Star Watch	Saturday, May 20	7:30 PM @ Observatory
Public Star Watch	Saturday, June 10	7:30 PM @ Observatory
EAS Picnic & Observing Session	Saturday, June 17	6:00 PM @ Ken Harris's House in Wayne City, Illinois

Secretary Dave Kube read our Treasurers report submitted by email from Mitch Luman. There were no areas of concern.

OLD BUSINESS

Special Projects Status – Bathrooms: both are usable now, but some work is still needed in the men's restroom. Office: nearly complete. Telescope Mount: Scott Conner reported the Design is nearly complete. Computer Upgrades: Dave Kube reported that the System upgrade has been complete. A new 27" monitor and new video card was purchased with a \$150 value donated by Kube. All other parts were used and also donated by Dave Kube.

NEW BUSINESS

Business Entity Report – Treasurer Mitch Luman has submitted our 2023/2024 Business Entity Report to the Secretary of State.

First PSW of 2023 – Our first PSW of 2023 will be on tomorrow night, April 22. The event is posted to our Facebook, our website, and the City of Lynnville online event calendar. We hope to have a crowd as large as the PSW's held at the end of 2022. If anyone desires to help Ken, and Dave, with this event, please let them know.

Library Telescope Presentation – Tony Bryan will be giving a talk at the Chandler Library on April 27 at 5:30 PM. The topic will be on stargazing and how to use the 4.5" Dobsonian Library Telescope.

Astronomy Day & Moon Watch - National Astronomy Day will take place on Saturday April 29 from Noon to 4 PM. There will be solar observing and hands-on activities for children. There will be two showings of the giant screen movie, Big Astronomy playing in the theater. Those in attendance can expect storytelling, staff hosted planetarium show, plus, NASA Solar System Ambassador (SSA) Tony Bryan will be presenting information on NASA Programs. Following the daytime activities, an evening star watch will take place in front of the Museum beginning at dusk. Volunteers are needed for daytime and evening activities.

Second PSW of 2023 – Our second PSW of 2023 will be May 20. 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. Dave and Ken volunteered, however Dave stated he is working that Day until 6pm and will be able to assist but not setup.

ANNOUNCEMENTS

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

Tonight's Program – Scott Conner will be our presenter for the program entitled Unusual Stars this evening.

Meeting was adjourned by Vice President Scott Conner @7:45pm

Respectfully Submitted – Dave Kube – Secretary