

## *EAS Observatory has Updated Equipment*



Scott Conner and Tony Bryan pictured here finalizing the install of the newly donate 7" refractor replacing the previous 6". Also installed was a donated 8" RC telescope. Mounting hardware was fabricated by Scott.

*Photo Courtesy Dave Kube- EAS*

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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 2024 Officers and Contacts**

President – Tony Bryan  
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Vice President – Scott Conner

Secretary – 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 Friday, March 15<sup>th</sup>, 2024 at 7:30pm. This meeting will be held at the Observatory. Please see our Facebook Group and Webpages for Updates.

### EAS Update

Please Note. : We have our 1<sup>st</sup> PSW scheduled for Saturday, March 16<sup>th</sup>, 2024 at 7:30pm. This event will be held at the Observatory. Please see our Facebook Group and Webpages for Updates.

### EAS Update

We have an Observe the Sun event scheduled for Saturday, April 6<sup>th</sup>, 2024. This is a museum daytime event and will be open to the public. Please see our Facebook Group and Webpages for Updates.

### EAS Update

Please Note: There is a Solar Eclipse on Monday, April 8<sup>th</sup>, 2024. Please enjoy and use the proper eye protection.  
**BE SAFE!!!!**

### EAS Update

Please Note. : We have a Regular meeting scheduled for Friday, April 19<sup>th</sup>, 2024 at 7:30pm. This meeting will be held at the Observatory. 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...

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>

**Astronomers Find New Moons of Uranus and Neptune.**



Uranus (left) and Neptune (right).

The three new moons for Uranus and Neptune are each part of a “family,” groupings that fragmented from a single parent object.

Photo Credit: *Patrick Irwin / University of Oxford/NASA*

The discovery of three previously unknown moons of Uranus and Neptune shows that the ice giants, like Jupiter and Saturn, have families of far-flung moons formed by the fragmentation of larger, captured objects. More moons are likely out there, but we’d need to send a space probe to see them.

Dozens of moons have been discovered around Jupiter and Saturn over the past two decades. However, since 2003 no new moons had been discovered orbiting Uranus, and only one new moon was officially added for Neptune. The new discoveries bring the total tally to 28 for Uranus and 16 for Neptune.

These outer solar-system moons are hard to find, Scott Sheppard (Carnegie Science) says, because “these objects are at the edge of detectability.”

Planetary scientists suspect that the outer solar system may hold the key to understanding how the solar system formed and its early evolution. Because of that, the decadal survey released last year by the National Academy of Sciences put a high priority on launching a major mission in the mid-2030s called the Uranus Orbiter and Probe. “The ice giants have been neglected,” says Sheppard. He adds that some have even urged a mission to Neptune.

**Why are there no green stars?**



Because of the way our eyes see combinations of frequencies of light, green can never dominate the color of a star.

Photo Credit: *Stephen Rahn*

The color of stars, or anything that gets really hot, is connected to its temperature. This is because hot objects emit light, which is called thermal radiation. The color of this light — or in physical terms, its frequency — depends on the temperature. As any object gets hotter, it emits more and more of its light at higher frequencies. The same way it takes you more energy to jump at a faster rate, it takes more energy to emit light at higher frequencies. These higher frequencies appear blue to our eyes, while lower frequencies appear red. So as an object gets hotter, it generally gets bluer. As a result, the hottest stars appear to us as blue, but cooler stars appear red.

So why can’t stars with temperatures in between appear green? The answer is a result of the way our eyes see combinations of frequencies: Our eyes add up all the colors that come in, and the color we see is the result of this addition.

“Green” is a very specific frequency, but stars emit light smoothly across a broad spectrum. Think of this spectrum like a playground seesaw with a rainbow painted on it, blue on one end and red on the other. This seesaw tilts based on temperature, and the color we see is a mixture of all the colors on the seesaw. Here’s the trick, though — we see more of whichever colors are higher off the ground. If a star is really hot, the blue end is tilted up, so blue dominates over the other colors and we see this star as blue. If it’s cool and the red end is tilted up, red dominates and we see this star as red..

April 2024

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6 Museum Pre- Eclipse
7	8 Solar Eclipse	9	10	11	12	13
14	15	16	17	18	19 Reg.Mtg. 7:30pm	20
21	22	23	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 March 15<sup>th</sup>, 2024 @ Observatory.

Please Note we have a PSW scheduled for 7:30pm on Saturday, March 16<sup>th</sup>, 2024 @ Observatory.

Please Note there is an Observe the Sun event on Saturday, April 6<sup>th</sup>, 2024 @ Museum.

Please Note there is a Solar Eclipse on Monday, April 8<sup>th</sup>, 2024.

Please Note we have a Reg. Mtg. scheduled for 7:30pm on Friday April 19<sup>th</sup>, 2024 @ Observatory.

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
April 8 <sup>th</sup> , 2024	April 15 <sup>th</sup> , 2024	April 23 <sup>rd</sup> , 2024	April 1 <sup>st</sup> , 2024

[Moon Phases courtesy of Time and Date.com](http://www.timeanddate.com)

Evansville Astronomical Society, Inc.

February 15, 2024

Resolution on Increasing Dues and Setting Cost Parity for Regular and Family Membership Categories

WHEREAS the overall average cost of goods and services has increased 33% over the past ten year period, the operating expenses of Evansville Astronomical Society (EAS) have increased beyond that due to insurance costs and internet fees, and during that same period dues have remained unchanged; and

WHEREAS two classes of membership exist (viz, Regular Membership and Family Membership) yet benefits for each class are effectively the same; now, therefore, be it RESOLVED that the Evansville Astronomical Society (EAS):

1. increase the annual membership dues to \$65; and
2. set the dues for Regular Membership and Family Membership to be the same.

Motion by: Anthony Bryan, EAS Executive Committee Chair

Seconded by: Scott Conner, EAS Executive Committee

Dave Kube, EAS Executive Committee

Ben Cruce, EAS Executive Committee

Chuck Allen, EAS Executive Committee

Rev A 02012024

## ***EAS Meeting for February – 2024***

The originally schedule meeting to be conducted at the museum was changed to a virtual zoom meeting due to inclement weather. Prior to the business meeting we were presented by Ron Macnaughton, member of three astronomy clubs including the Royal Astronomical Society of Canada, and currently serving on the RASC Outreach Committee discussing, How Ancients Predicted Eclipses. The business meeting was called to order by president tony Bryan @8:45pm. Board members present were Tony, Scott, Dave and Ben. There were attendees logged in via zoom including our guest speaker and one visitor. Reading of the minutes was motioned, seconded and accepted the minutes as published in the January Newsletter.

Vice President Scott Conner read the following upcoming events.

<b>Nature Study Group Tour</b>	<b>Saturday, March 9</b>	<b>7:30 PM @ Observatory</b>
<b>Regular Meeting</b>	<b>Friday, March 15</b>	<b>7:30 PM @ Observatory</b>
<b>Public Star Watch</b>	<b>Saturday, March 16</b>	<b>7:30 PM @ Observatory</b>
<b>Observe the Sun</b>	<b>Saturday, April 6</b>	<b>11AM - 4 PM @ Museum</b>

### **Treasurer Report –**

Ben Cruce reported that finances are still good and had a few new memberships.

### **Old Business**

**Special Projects Status – Bathrooms:** due for completion prior to March meeting.

Telescope Mount: Almost finished per Scott Conner.

**2024 Planning Session –** The Officers and Councilors of the EAS meet on Sunday, January 21<sup>st</sup> for our annual planning session. An updated EAS calendar has been posted to our website.

During the “Facilities” agenda item discussion at our planning meeting, several items that we have been deferring were discussed. Let’s face it, our facility has grown old. There will come a point in time when certain things cannot be ignored. We will be developing a plan this year to address these items. In no particular (not prioritized) order they are:

- Exterior Painting – only a couple years of life remaining and is degrading rapidly
- Shingle Roof Replacement - it still has a few years of life remaining
- Dome Flat Roof Refurbishment – has been needed for a couple years
- Dome Repair/Maintenance – this has been an ongoing project
- Dome Painting – galvanization is getting thin and areas are showing rust
- Tree Cutting – needed every few years

Members that desire to assist with resolving these facilities concerns may contact an officer. Any help is greatly appreciated.

### **New Business**

**Dues Resolution –** Resolution explained and read to membership. Resolution incorporated into minutes and posted on page 5 of this newsletter. Ben will update the online paypal info with the new data.

**Eclipse Activities –** We are still receiving requests for presentations and interviews ahead of the upcoming April 8th Total Solar Eclipse. If anyone hears of a request, or would like to give or assist with a talk, please let us know.

## EAS OBSERVER NEWSLETTER

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**Donation of Telescope Parts** –Don Swaney of Tell City donated all the optical path piece parts to construct a 12.5" f/6 Newtonian telescope to the EAS. Tony and Dave met with Don in Tell City and picked everything up. All of the parts are high quality. An OTA and some form of mount is needed to put the scope in service.

**Library Telescope Status** – The library scope awarded to the EAS by the Astronomical League arrived, items required to ruggedize the scope and eyepiece arrived, and all modifications of the scope are complete. We are currently working with the Dubois Public Library to arrange a date for the donation to take place. Dave also help with collimating this telescope.

**Cub Scouts Day Camp Request** - The Cub Scouts are having a day camp at the Dubois County 4-H fairgrounds (in Bretzville, near Jasper and Huntingburg). They are requesting speakers June 4, 5, 6 (probably around the lunch hour) and desire a speaker for their "Outer Space" themed camp one of those days. Please see Tony if you are interested. Dave Kube said he could possibly attend.

**Nature Study Group** - We have about 22 people from a Nature Study Group visiting our observatory for a tour and stargazing on March 9<sup>th</sup>. Scott, Dave, and Tony will be hosting them. Any member that wants to assist, or join us to learn how to conduct such activities, is welcome to join us. Please see one of the hosts to express your interest.

**Other New Business** – Scott Conner mentioned that he has an interview with Jeff Lyons tomorrow.

### ANNOUNCEMENTS

**Next Monthly Meeting** - Our next regular meeting is scheduled for 7:30 PM on March 16<sup>th</sup> 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.

**EAS Merchandise** – 3" round iron-on / sew-on cloth patches with the EAS logo have been ordered and will be available for purchase before our March meeting. These will look great on a shirt, vest, or coat, and will bring attention to your society whenever you have it on. Cost for members is \$9.00 each.

### ADJOURN MEETING

Meeting was adjourned @9:00pm by president Tony Bryan.

Respectfully Submitted – Dave Kube – Secretary