

EAS Regular Meeting – October 18, 2019 @7:30pm



**October Presenter SCOTT
HARRINGTON**

**50+ DEEP SKY OBJECTS VISIBLE TO
THE NAKED EYE AND IN 7x35
BINOCULARS**

**From his home in Evening Shade,
Arkansas. Peltier Award nominated 11-
year project, determining the limits of
human observing ability using only the
naked eye or 7x35 binoculars ...
reaching more than twice the objects
listed in the League's Binocular
Messier and Deep Sky Binocular
programs (which most people tackle
using far larger binoculars). Scott is on
track to observe 240 of the Herschel
400 objects using only 8x56 binoculars
(189 to date), and has observed 62
Andromeda globulars using only a 10-
inch SCT.**

Photo provided by Chuck Allen

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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

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 2019 Officers and Contacts

President – Tony Bryan
812.827.3234

evansvilleastro@gmail.com

Vice President – Scott Conner

Secretary – David M Kube
740.223.6854

Treasurer – Ted Ubelhor

Counselors
Mitch Luman (2017)
Michael Borman (2018)
Ken Harris (2019)

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 at the Observatory on Friday, October 18th, 2019 @ 7:30pm.

EAS Update:

Please Note we have a PSW scheduled at the Observatory on Saturday, October 26th, 2019 beginning @7:30pm. This will be a Halloween Special Event.

EAS Update:

Please Note we have an event @ the Evansville Museum for the Girl Scouts from 7-9pm.

EAS Update:

Please Note there is an Astronomical Event on Monday, November 11th – beginning at sunrise. This will be the transit of Mercury across the face of the sun. Please use the necessary eye protection while looking at the sun. Solar eclipse glasses will be great if you have them but will be very small.

EAS Update:

Please Note we have a Regular Meeting scheduled at the Observatory on Friday, November 15th, 2019 @ 7:30pm.

EAS Update:

Please Note we have a PSW scheduled at the Observatory on Saturday, November 16th, 2019 beginning @7:30pm.

EAS Update:

Please Note we have a Regular Meeting scheduled at the Evansville Museum on Friday, December 20th, 2019 @ 7:30pm. This will be our annual astronomy Quiz event. Mike Borman was last years winner and will be the nominated presenter for this years quiz.

EAS Update:

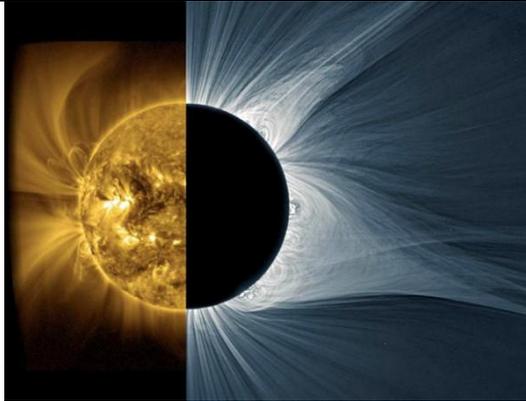
Please Note This is the end of our Calendar year and a new schedule will be published as soon as the officers meet early next year. Please be reminded that will be voting on new officers in the November Meeting so have your nominations ready.

For Sale...

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>

What's Hotter than the Surface of the Sun? The Solar Corona.



On the left, the Sun's wispy atmosphere glows with ultraviolet light, captured by the European Space Agency's PROBA2 satellite. Loops and arcs of plasma follow magnetic field lines coming from the Sun. On the right, light scattering off particles in the corona becomes visible during the 2017 total solar eclipse that traversed the United States.

S.R. CRANMER AND A.R. WINEBARGER / *AR ASTRONOMY AND ASTROPHYSICS* 2019.
ORIGINAL FROM M. DRUCKMÜLLER ET AL / *CONTRIB ASTRON OBS S* 2006

In the final moments before a total solar eclipse, the temperature drops, birds and insects sing, and the ambient light becomes otherworldly. Daytime morphs into a 360-degree dusk, and where the Sun once hung a black hole punches through the sky, wreathed by a white ethereal glow.

That glow is the solar corona, the Sun's tenuous upper atmosphere of ionized gas. Composed mostly of electrons and the bare nuclei of hydrogen and helium atoms, it is the launchpad for the solar wind — the stream of charged particles that escape the corona and wash over the planets, eventually petering out at the threshold to Interstellar Space. Events in the corona affect all of the Sun's worlds, including Earth and the technological society that humans have built upon it.

And yet, despite roughly 80 years of study, much about the corona remains a mystery. The solar wind doesn't slow down as it leaves the Sun — it speeds up. Some particles shoot out of the corona with so much energy that they approach the speed of light. And perhaps most baffling of all, the corona is hundreds of times hotter than the Sun's surface.

A Trip to Costa Rica Can Deliver the Lifelong Dreams of a Night Sky.



Just north of Omega Centauri lies one of the sky's most incredible interacting galaxies, Centaurus A (NGC 5128). This peculiar system is the result of a galactic merger, and may presage what the Milky Way and Andromeda galaxies will look like 5 or 6 billion years from now.

MICHAEL SIDONIO

Bart Bok (1906–1983) and his wife Priscilla really became masters of the Milky Way, understanding our galaxy better than anyone else at the time, and wrote their famous book *The Milky Way*, which went through five editions, beginning in 1941. In the late 1970s and early 1980s, when you would talk to Bart about deep-sky observing, he would periodically interject, with a twinkle in his eye, "Just remember that all the good stuff is in the southern sky."

His statement wasn't terribly far off from reality. Despite the fact that only about 15 percent of the human population lives in the Southern Hemisphere, more than half of the brightest, largest, and most dazzling clusters, nebulae, and galaxies are in the southern sky. And so they can only be seen best, or at all, on a trip to the south. That conundrum has set up one of the great pilgrimages in amateur astronomy — traveling to the Southern Hemisphere at least once, or maybe a few times, in one's observing life.

November 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3 Daylight Savings Time Ends 2am	4	5	6	7	8	9 Girl Scouts @Museum 7-9pm
10	11 Mercury Transit @Sunrise	12	13	14	15 Reg.Mtg. 7:30pm	16 PSW 7:30pm
17	18	19	20	21	22	23
24	25	26	27	28	29	30

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Up and Coming Events 2019

Regular Meeting – Friday, October 18th @ Observatory @ 7:30 pm
PSW – Saturday, October 26th - Halloween Special @ Observatory @ 7:30 pm
Girl Scouts @ Museum – Saturday, November 9th @ Museum @ 7:00 - 9:00 pm
Transit of Mercury – Monday, November 11th @ Sunrise
Regular Meeting – Friday, November 15th @ Observatory @ 7:30 pm
PSW – Saturday, November 16th - @ Observatory @ 7:30 pm

Moon Phases

New Moon	First Quarter	Full Moon	Third Quarter
November 26 th , 2019	November 4 th , 2019	November 12 th , 2019	November 19 th , 2019
Moon Phases courtesy of Time and Date.com			

EAS Meeting Minutes for September – 2019

The September 20th, 2019 meeting was called to order at 7:43 pm by Vice President Scott Conner as Tony Bryan was absent. There were 9 members and 5 visitors present. The officers present were Scott Conner and Dave Kube. Ken Harris made the motion that the minutes from the August meeting be accepted as published in the September Newsletter. That motion passed unanimously.

V. President Scott Conner mentioned the following upcoming events.

PSW#5	Saturday, September 28	7:30 at the Observatory
Sciencepalooza / Astronomy Day	Saturday, October 5	11:00 – 4:00 @ Museum
Fall Cleanup	Saturday, October 12	10:00 AM at the Observatory
Regular Meeting	Saturday, October 18	7:30 @ Observatory

TREASURER'S REPORT

Treasurer Ted Ubelhor was absent and Dave Kube reported Ted had not forwarded his financials so we could not make any report this month.

SPECIAL PROJECTS

Tony Bryan reported via email that there is no significant change in status of any of our special projects or Capital Campaign. Mitch Luman has volunteered to assist with the Capital Campaign.

OLD BUSINESS

PSW #4 – Our forth PSW took place on August 24. Ken Harris reported that we had 17 visitors and 6 members present.

NEW BUSINESS

PSW #5 – Our next PSW is scheduled for September 28. Dave Kube and Ken Harris volunteered to lead this event.

Sciencepalooza / Astronomy Day - Sciencepalooza / Astronomy Day will take place on Saturday, October 5 from 11:00 – 4:00 at the Museum.

Fall Cleanup – It's almost here! On Saturday, October 12 at 10 AM we will be doing our semi-annual cleanup and maintenance of the Observatory. There is a lot that needs to get done and the more people that we have, the more items we can check off. Lunch will be provided. Please help out on that day.

Quest Speaker at October Meeting – As posted on the EAS Facebook page, Chuck Allen will “be bringing Scott Harrington, 25, to Evansville from his home in Evening Shade, Arkansas, to speak on his Peltier Award nominated 11-year project determining the limits of human observing ability using only the naked eye or 7x35 binoculars.”

Transit of Mercury – The EAS will be setting up telescopes in Evansville for the Transit of Mercury which begins at sunrise on Monday November 11. You don't want to miss this event, because the next one will not take place until November 13, 2032. There are approximately 13 transits of Mercury each century. Seeing a transit depends on the cloud conditions as well as where you are located on the globe.

Stars on the Beach 2020 – In response to a request from the staff at Patoka Lake, dates for Stars on the Beach 2020 have been set, pending agreement with Patoka staff. Dates are July 18 (primary date) and August 15th (rainout date). Both dates have a waning crescent moon.

Matt Merlo conveyed his thanks for those that assisted with the ISU Museum in New Harmony event.

ANNOUNCEMENTS

Next Monthly Meeting – Our next regular meeting is scheduled for 7:30 PM on October 18th at the observatory.

The program for tonight is by Scott Conner entitled “Comparative Sizes in the Universe “

ADJOURN MEETING

The meeting was adjourned at 7:55 pm by Vice President Scott Conner

Respectfully Submitted – Dave Kube – Secretary