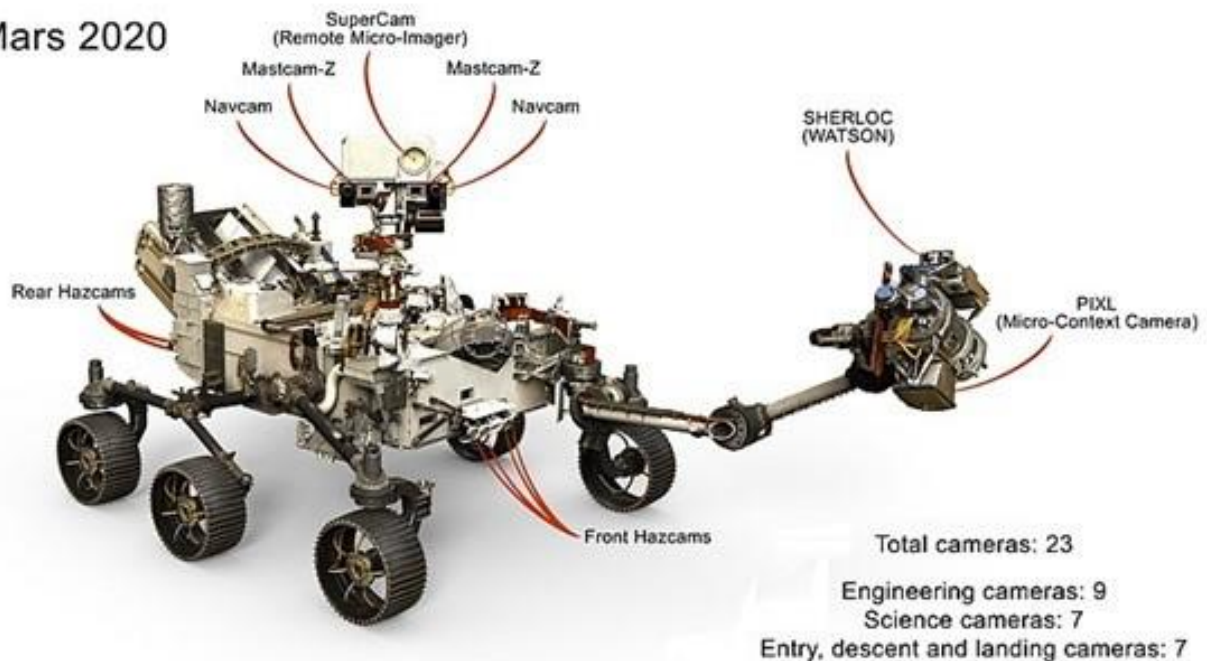


November Meeting at the Observatory Friday November 17th, 2017 @ 7:30pm

Mars 2020



This image shows a selection of the 23 cameras on NASA's Mars 2020 Rover. Though many are just drastically improved versions of the Curiosity Rover's cameras, there are a number of new additions as well.

Photo Courtesy NASA/JPL-Caltech

Inside this Issue..

- 2 – Local Events and information
- 3 – News around the Globe
- 4 – Calendar
- 5 – EAS Business – Minutes

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 2017 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
Michael Borman
Ken Harris
Mitch Luman

Webmaster – Michael Borman

Program Director
Tony Bryan

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 Schedule Update:

Please Note we have a Regular scheduled meeting on Friday, November 17th, 2017 @ Observatory @ 7:30 pm. Scheduled Presentation by Chuck Allen on "Gravity" and as a backup presentation Mike Borman will present "Okie-Tex 2017".

EAS Update:

Please Note we have a PSW scheduled on Saturday, November 18th, 2017 @ Observatory @ 7:30 pm.

EAS Update:

Please Note we have a Regular scheduled meeting on Friday, December 15th, 2017 @ Museum @ 7:30 pm. This is our annual Christmas Pot Luck and Astronomy Quiz.

EAS Update:

Please Note we have a Regular scheduled meeting on Friday, January 19th, 2017. Location and time yet to be determined.

EAS Update:

Please Note

EAS Update:

Please Note

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>

Kronos: The Eater of Planets.



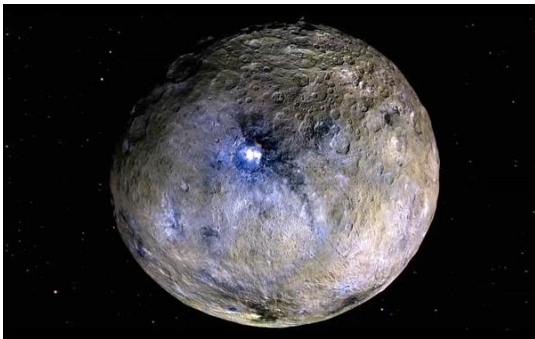
This artist's concept illustrates the diverse range of rocky planets already found in our own galaxy.
NASA/JPL-Caltech/R. Hurt (SSC-Caltech)

Researchers found evidence that Kronos, a Sun-like star located about 350 light-years away, has gobbled up 15 Earth masses worth of rocky planets.

Our Sun has been pretty good to us here on Earth over the last billion or so years. Sure we get the occasional solar storm and some deviations from ideal temperatures. But, by and large, we have a relatively supportive parent star. It's nothing like those poor planets that orbit the star Kronos (HD 240430), located some 350 light-years away.

On September 15, a team of Princeton astronomers posted a paper on the physics pre-print site arXiv.org that argues the star Kronos devoured over a dozen of its rocky inner planets during the course of its 4 billion year lifetime. However, its companion star, Krios (HD 240429), has managed to avoid feasting on its own solid worlds.

Finding Ceres' Global Oceans.



Ceres is the only dwarf planet in the inner solar system. Shown in false color, the color differences here highlight differences in surface composition.
NASA/JPL-Caltech/UCLA/MPS/DLR/IDA

NASA's Dawn mission continues to reveal the intriguing past of Ceres, the Texas-sized dwarf planet residing in the main asteroid belt. Now, two new studies are delving even deeper into the world's potentially water-rich history. One study found that Ceres' crust contains materials such as ice and salts that have undergone past and possibly recent geologic activity; another identified a relatively soft, malleable layer of material just below the hard outer crust. Both point to the possibility of a global ocean in Ceres' past, and even the remnants of that ocean beneath the surface today.

"More and more, we are learning that Ceres is a complex, dynamic world that may have hosted a lot of liquid water in the past, and may still have some underground," said Julie Castillo-Rogez of NASA's Jet Propulsion Laboratory (JPL) in Pasadena, California, in a press release.

First Known Interstellar Interloper.



A rocky object a few hundred meters across has traveled from another solar system and swung through our own.
NASA/JPL-Caltech

In an article "Seeking Rogue Comets," planetary scientist Alan Stern confidently predicted that astronomers would someday discover an interstellar comet.

"We had a pretty good idea this was coming," says Stern, who is now the principal investigator of NASA's New Horizons mission to Pluto and the Kuiper Belt.

Stern would have to wait 20 years for his prediction to come true. But when it did, it led to a flurry of activity as large telescopes swung into action to take data during the brief period when the object was close enough to Earth to be visible.

The discovery itself occurred on the night of October 19, 2017 when University of Hawaii astronomer Rob Weryk noticed an unusual 20th-magnitude streak in Pisces in images taken with the 1.8-meter Pan-STARRS 1 telescope.

The Minor Planet Center has just given this interstellar interloper the permanent designation 1I/ʻOumuamua.

EAS OBSERVER NEWSLETTER

December 2017

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 Museum	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Generated by FreeHTMLCalendar.com Copyright © 2011 John Dalbey.

Up and Coming Events 2017

Regular Meeting – Friday November 17th – Observatory @ 7:30 pm

PSW – Saturday October 21st – November 18th @ 7:30 pm

Regular Meeting – Friday December 15th – Museum @ 7:30 pm

Regular Meeting – Friday January 19th – To Be Determined

Moon Phases

New Moon	First Quarter	Full Moon	Third Quarter
December 18 th , 2017	December 26 th , 2017	December 3 rd , 2017	December 10 ^h , 2017

Moon Phases courtesy of Time and Date.com

EAS MEETING for October 20th, 2017

The meeting was called to order at 7:36 pm by President Tony Bryan. There were 11 members present. The reading of the minutes was called to be accepted as published in the newsletter and seconded. The motion passed by majority vote. There were no visitors present.

UPCOMING EAS EVENTS – V. President Scott Conner announced the below list of up-coming events.

PSW #6	Saturday, October 21	7:30 pm @ Observatory
EAS Meeting	Friday, November 17	7:30 pm @ Observatory
PSW #7	Saturday, November 18	7:30 pm @ Observatory
EAS Meeting	Friday, December 15	7:30 pm @ Evansville Museum

TREASURER'S REPORT – Treasurer Ted Ubelhor reported that we now have 43 paid members and 9 still unpaid from last year. Ted, also reports, that we have funds in our accounts.

SPECIAL PROJECTS

Scott Conner reported that he has moved the product in his office in preparation of manufacture but we are still a ways away from installation of the Astro-Tech AT8RC. Tony Bryan reported that we need to get the roof repairs completed before we can consider further progress on the Storage Room.

OLD BUSINESS

The **Ferdinand Folk Festival** took place on September 16th, 2017. Dave Kube reported that he had help from CC and her husband Tom. There was over 100 guest with much interest still in the recent Solar Eclipse. We had our **5th PSW** on Saturday, September 23rd, 2017. Ken Harris presented to 20 guests while Bob Flater and Matt Merlo operated the dome and telescope. Tony Bryan reported that we had 8 members present for our **Fall Cleanup** on October 7th, 2017. Majorities of the tasks was completed and we are set for another Winter Season.

NEW BUSINESS

PSW #6 will be held on October 21st, 2017. **Special Recognition and Pin** was presented to Mitch Luman for his planning and orchestration for the Solar Eclipse Tour and his promotion Astronomy to the general public. Mitch was not in attendance for the September meeting when we had many such presentations. **Questar 12" Telescope from Museum**, Mitch Luman stated that we will have more info available after the November Meeting for the Museums Board Members. There is a Sky Pod available in Illinois and a motion was carried to make an offer. **PSW #7** will be held on November 18th, 2017. This Saturday, the EAS will be taking part in the **Patoka River National Wildlife Refuge Friends "A World of Waters and Wildlife"** at Wirth Park in Oakland City, IN. The EAS will have an informational booth setup and be doing solar observing from 9 AM to 2 PM CDT.

ANNOUNCEMENTS

Upcoming Elections – At the November meeting, we will be voting for officers for the 2018 year. All of the current officers have stated they will run and expressed their desire to continue in their role. The current slate of officers is as follows: President-Tony Bryan; Vice President – Scott Conner; Treasurer – Ted Ubelhor; Secretary – Dave Kube. If any adult member in good standing desires to run for office, they may state their interest any time before the election starts. Also, nominations from the floor will be accepted before the voting takes place.

November Meeting Presentation – After the business portion of the November 17th monthly meeting, Chuck Allen, friend of the EAS, will be here to give a presentation on gravity. If Chuck has to postpone his talk for some unforeseen reason, Mike Borman will be giving a multi-media presentation on Okie-Tex 2017.

Program for Tonight – Multi-Media presentation of the Great American Solar Eclipse as photographed by various EAS members.

Meeting was adjourned at 7:59pm