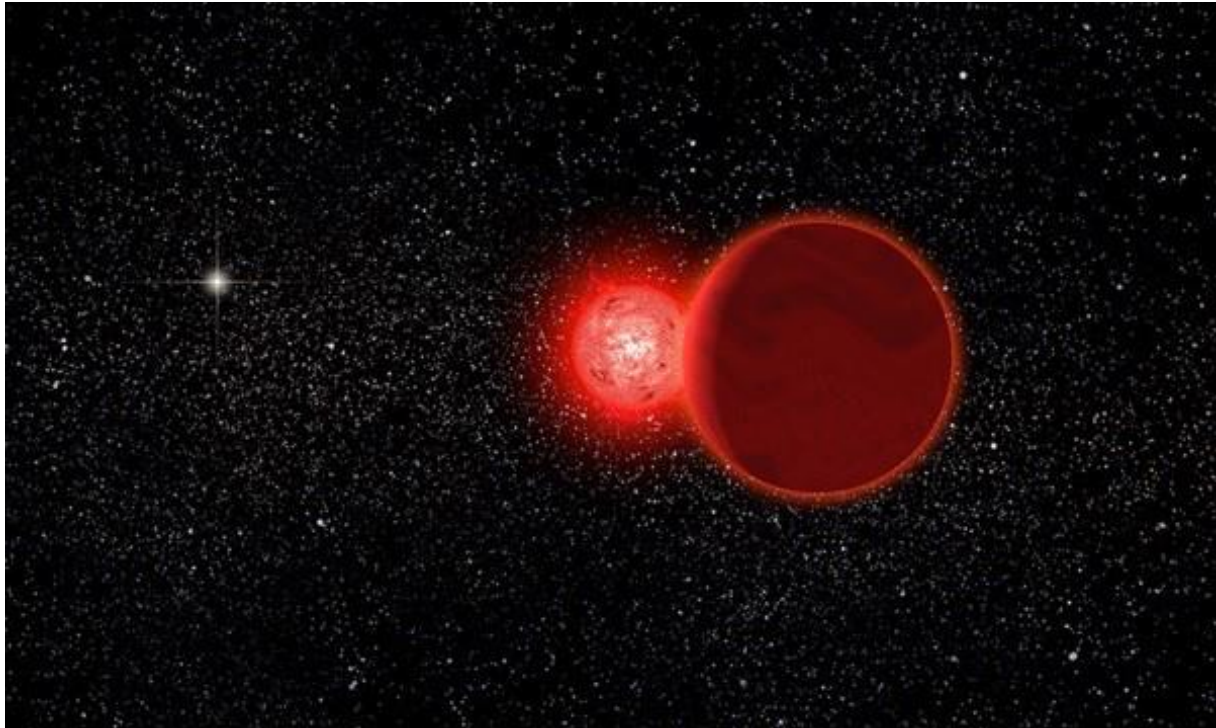


Wandering Stars Pass Through Our Solar System Surprisingly Often



Scholz's Star and its binary brown dwarf fly by our solar system some 70,000 years ago in this artist's illustration. Our sun shines bright in the background .

Photo Courtesy: Michael Osadciw/University of Rochester

Every 50,000 years or so, a nomadic star passes near our solar system. Most brush by without incident. But, every once in a while, one comes so close that it gains a prominent place in Earth's night sky, as well as knocks distant comets loose from their orbits. The most famous of these stellar interlopers is called Scholz's Star. This small binary star system was discovered in 2013. Its orbital path indicated that, about 70,000 years ago, it passed through the Oort Cloud, the extended sphere of icy bodies that surrounds the fringes of our solar system. Some astronomers even think Scholz's Star could have sent some of these objects tumbling into the inner solar system when it passed.

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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

To the Members of the EAS

Zoom Presentation this Friday Evening - Please join us this coming Friday evening, January 15th, beginning at 7:30 PM CST, for our monthly Evansville Astronomical Society presentation. REPEAT 7:30 PM CST.

Our speaker will be John Edward Ventre, former Executive Director of the Cincinnati Observatory Center and award-winning educator. John will take us on a video tour of the Cincinnati Observatory and offer some insights about the involvement of President John Quincy Adams in the observatory's history and his own investigation of the stolen lens.

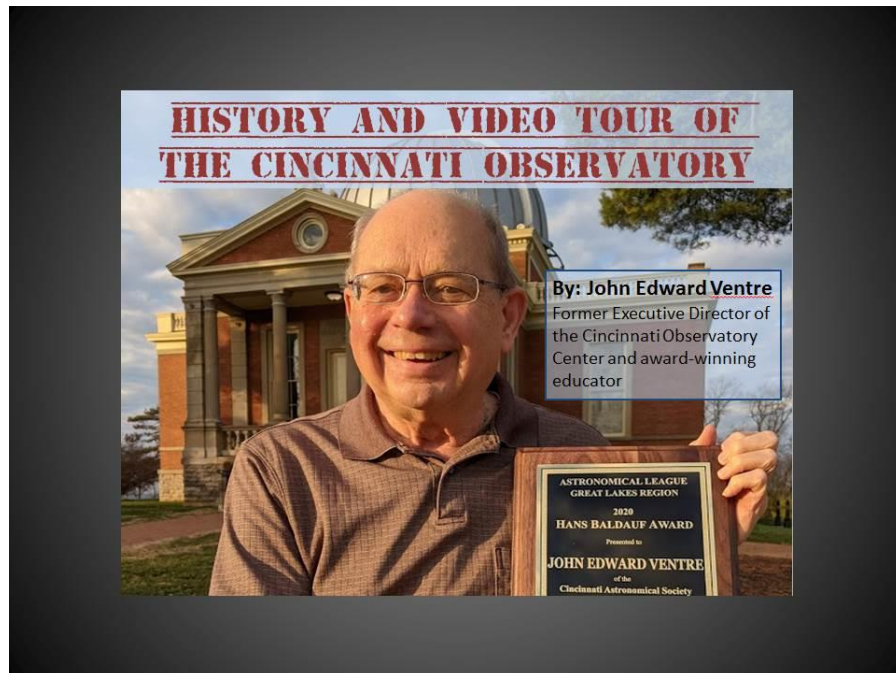
The evening is open to all that desire to participate.
To join the Zoom Meeting, use the following link:

<https://us02web.zoom.us/j/89298524321>

Meeting ID: 892 9852 4321

Passcode: 528335

Clear skies,
Tony Bryan
EAS President



Please check our Facebook Group Page and Website for updates.

If you are unfamiliar with online meetings, you may wish to visit the following link ahead of the meeting night to learn more:

<https://support.zoom.us/hc/en-us/articles/201362193-How-Do-I-Join-A-Meeting>

The Evansville Astronomical Society now has a Youtube Channel and for those that missed the live sessions of our previous Zoom Meetings and Presentations, you can watch a video stream of these events. This link can also be found on our website <http://evansvilleastro.org>

<https://www.youtube.com/channel/UC8A9iE6gz0JE1Rr8VuxqmDg?fbclid=IwAR0In5rjdsA-GdGKkhLTvVRFx1fENmVeSPpWtw2Rc6sBB79w702cLyB1n14&app=desktop>

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 2021 Officers and Contacts

President – Tony Bryan
812.827.3234

evansvilleastro@gmail.com

Vice President – Scott Conner

Secretary – Dave Kube
740.223.6854

Treasurer – Amy Barrett

Counselors
Ken Harris (2019)
Mitch Luman (2020)
Michael Borman (2021)

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 that we currently we have a Zoom Meeting Scheduled January 15th, beginning at 7:30 PM CST.

EAS Update

Please note that currently all public meetings have been canceled and therefore we are trying to meet via online Zoom Meeting until further notice.

EAS Update

EAS Update

EAS Update

EAS Update

EAS Update:

Please visit our website www.evansvilleastro.org and our Facebook Group page to keep yourself up to date for any changes.

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>

Hibernating Lemurs may be the Key to Cryogenic Sleep for Human Space Travel



Gray mouse lemurs are more closely related to humans than mice. They also have the ability to hibernate, and researchers are hoping to learn how to transfer that ability to humans..

Credit: Shutterstock

Science fiction is shifting into reality. With humanity's plans to return to the Moon this decade and further ambitions to travel to Mars in the next, we need to figure out how to keep astronauts healthy for these years-long missions. One solution long championed by science fiction is suspended animation, or putting humans in a hibernation-like sleep for the duration of travel time.

Space is unforgiving. In this freezing void of darkness there is no oxygen, no gravity and no protection against the constant shower of cosmic radiation.

However, scientists and engineers working with astronauts on the International Space Station have innovated and continue to address these problems. For example, we know that spaceflight leads to loss of muscle and bone density, since our bones and muscles do not need to work against the pull of gravity to move us around. But we still do not know how to address other space-related medical issues.

These challenges are combined with the technological difficulties of sending multiple humans on these long missions where they face logistical complications of packing and allocating enough provisions and supplies, as well as social issues of coping with extreme isolation in deep space.

7 Naked-Eye Supernovae Throughout Human History.



Supernova RCW 86.

Credit: X-ray: NASA/CXC/SAO & ESA;
Infared: NASA/JPL-Caltech/B. Williams (NCSU)

Supernova RCW 86: The oldest recorded supernova In 185 A.D., Chinese astronomers saw a strange "guest star" suddenly appear in the night sky.

Supernova G347.3-0.5: Chinese 'guest star 'For months, the supernova of 393 A.D., now cataloged as G347.3-0.5, was visible shining in Earth's night sky.

SN 1006: Supernova recorded in rock art? In late April , the year 1006 A.D. would be a strong contender for the best time to stargaze in human history., a staggeringly bright "guest star" exploded into Earth's skies in the constellation Lupus.

SN 1054: The Crab Nebula On July 4, 1054 A.D., all of Earth was treated to celestial fireworks as a new star appeared in the constellation Taurus the Bull.

Supernova 3C58: Seen by ancient Asian Astronomers. Chinese and Japanese astronomers are both thought to have witnessed Supernova 3C58 in the year 1181 A.D

SN 1572: Tycho's Supernova. When SN 1572 appeared in Earth's night sky back in 1572 A.D., the bright new star shone proudly in the constellation Cassiopeia.

SN 1604: Kepler's Supernova. The supernova of 1604 takes its name from astronomer and mathematician Johannes Kepler. After the new star appeared in Earth's night sky, he kept an eye on it for roughly a year.

February 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Generated by FreeHTMLCalendar.com Copyright © 2011 John Dalbey.

Up and Coming Events 2020

EAS Meetings and Events are currently on hold or cancelled due to the current COVID-19 situation.

Please note we have an online Zoom Meeting Scheduled for January 15th, 2020 @7:30pm.

Please visit our Web Page <http://www.evansvilleastro.org> for updates.

Please visit our Facebook Group Page for updates.

Moon Phases

New Moon	First Quarter	Full Moon	Third Quarter
February 11 th , 2021	February 19 th , 2021	February 27 th , 2021	February 4 th , 2021

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

EAS Unofficial Meeting Notes for December – 2020

We had an online Zoom Meeting for Members on December 18, 2020.

Our Zoom meeting was hosted by EAS President Tony Bryan with 15 members and our guest presenter was Mitch Luman. This year again we had our annual Christmas Constellation Quiz. Mitch had 2 categories Open and Expert. Open was geared more to the Amateur or Novice and Expert was for the rest of us. This was all presented on the Digistar 5 via the Zoom Meeting protocols.

Open Category Winners

Loraine Luman with 11 Correct Answers

Amy Barret with 9 Correct Answers

Donna Bryan with 4 Correct Answers

Expert Category Winners

Chuck Allen – 1st Place – (Chuck will conduct the Quiz next Year)

Mike Borman – 2nd Place

Scott Conner – 3rd Place

Chuck Allen will be creating certificate for all winners and also some medals.

Respectfully Submitted – Dave Kube – Secretary