

Comet NEOWISE Sizzles as It Slides by the Sun, Providing a Treat for Observers.



Photo Courtesy of Mike Borman: Taken from his home in Evansville, Indiana
Comet C/2020 F3 (NEOWISE) was discovered on March 27, 2020, from some 326 miles (525 km) above Earth's surface by NEOWISE, the Near Earth Object Wide-field Infrared Survey Explorer, which is a space telescope launched by NASA in 2009.

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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

Dear Members of the EAS – Regarding COVID-19

As the State of Indiana implements “Indiana Back on Track”, the officers and board of the EAS are reviewing the guidelines and monitoring state health data. We will determine when it is prudent to resume EAS operations, where we may need to make changes, and what our new normal will look like.

As soon as a date and plans are established, a notification will be sent via email and posted to our website and Facebook page. Meanwhile, our facilities remain closed. The officers and board of the EAS are committed to this society, and the health and wellbeing of the membership and the visiting public is a high concern.

In the meantime, to help satisfy your astronomy appetite we have identified a rich and interesting resource. NASA has recently launched the “NASA at Home” project, a growing collection of resources and opportunities that parents, teachers, and kids can use outside the classroom. The project contains free E-Books, Visual Tours, Podcasts, Stuff for Kids and Families, Be a Scientist, and Videos. New content is being added regularly. We encourage you to visit the site and explore what might interest you or other members of your family.

The URL is: <https://www.nasa.gov/nasaathome>

Stay safe and stay healthy.

Clear skies,
Tony Bryan

Message from our Treasurer – Amy Barrett Dear Members of the EAS – Regarding Membership Dues

Hello Everyone,

It's membership drive time! If you are a current member who has not yet renewed your membership, we ask that you do so soon. If you are not yet a member and would like to be, please complete our application from the website and mail to the address given.

<http://www.evansvilleastro.org>, the application link is on the left, fifth link down.

Thanks!
Amy Barrett

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 2020 Officers and Contacts

President – Tony Bryan
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Secretary – David M Kube
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Treasurer – Amy Barrett

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Michael Borman (2018)
Ken Harris (2019)
Mitch Luman (2020)

Webmaster – Michael Borman

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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



Local Events and Information

EAS Update

Please note that currently all EAS events are either cancelled or on hold. Please refer to the letter from our EAS president on page 2 of this newsletter.

EAS Update

EAS Update:

Please visit our website www.evansvilleastro.org and our Facebook 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>

What has the Juno Spacecraft Taught us About Jupiter?



NASA's Juno spacecraft (illustrated) has been orbiting Jupiter for four years, probing the giant planet's internal layout.

Credit: NASA

In the four years since NASA's Juno spacecraft went into orbit around Jupiter, it has slowly been coaxing the king of all the planets to reveal its deepest secrets — an astonishing catalog that includes daisy chains of continent-sized cyclones circling both of Jupiter's poles; vast hailstorms of ammonia-laden "mushballs"; a bloated, fuzzy core at the planet's center; and a convoluted magnetic field like nothing else in the solar system.

Named after the goddess Juno, who was Jupiter's wife in Roman mythology, the spacecraft was launched in August 2011 with the goal of understanding the giant planet's origin and evolution. Jupiter has more mass than all the other planets combined. Its far-reaching gravity has shaped the orbits of planets, comets and asteroids throughout the solar system's history. And its interior may harbor clues about what conditions were like when the planet arose from primordial gas and dust over 4.5 billion years ago.

With a little over a year left in the probe's primary mission, Juno scientists are busy trying to understand how all the intriguing disparate discoveries mesh into a coherent picture of Jupiter's inner life. The primary mission is scheduled to last until July 2021, though the team hopes to extend Juno's visit for a few more years beyond that.

Nabta Playa: The World's First Astronomical Site was Built in Africa and is Older than Stonehenge.



The stone circle of Nabta Playa marks the summer solstice, a time that coincided with the arrival of monsoon rains in the Sahara Desert thousands of years ago. Located in Africa, Nabta Playa stands some 700 miles south of the Great Pyramid of Giza in Egypt. It was built more than 7,000 years ago, making Nabta Playa the oldest stone circle in the world.

Credit: Wikimedia Commons

For thousands of years, ancient societies all around the world erected massive stone circles, aligning them with the Sun and stars to mark the seasons. These early calendars foretold the coming of spring, summer, fall, and winter, helping civilizations track when to plant and harvest crops. They also served as ceremonial sites, both for celebration and sacrifice.

These megaliths — large, prehistoric monuments made of stone — may seem mysterious in our modern era, when many people lack a connection with, or even view of, the stars. Some even hold them up as supernatural, or divined by aliens. But many ancient societies kept time by tracking which constellations rose at sunset, like reading a giant, celestial clock. And others pinpointed the Sun's location in the sky on the summer and winter solstice, the longest and shortest days of the year, or the spring and fall equinox.

Europe alone holds some 35,000 megaliths, including many astronomically-aligned stone circles, as well as tombs (or cromlechs) and other standing stones. These structures were mostly built between 6,500 and 4,500 years ago, largely along the Atlantic and Mediterranean coasts.

The chronology and extreme similarities between these widespread European sites leads some researchers to think the regional tradition of constructing megaliths first emerged along the coast of France. It was then passed across the region, eventually reaching Great Britain.

But even these primitive sites are at least centuries younger than the world's oldest known stone circle: Nabta Playa.

August 2020

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	29
30	31					

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Up and Coming Events 2020

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

Please read the letter from our EAS President on page 2 of this newsletter.

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
August 18 th , 2020	August 25 th , 2020	August 3 rd , 2020	August 11 th , 2020

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

EAS Meeting Minutes for June – 2020

The June, 19th, 2020 meeting was canceled due to the COVID -19 virus situations and therefore there are no minutes to report .

Respectfully Submitted – Dave Kube – Secretary