

Earth's Best Telescopes have Closed, but the Hunt for Dangerous Asteroids Continues



Photo Courtesy by Astronomy Magazine: Roen Kelly

Most of Earth's largest telescopes have been temporarily shut down amid the current coronavirus pandemic. But asteroid-hunting telescopes remain on the prowl for potentially hazardous objects.

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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

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

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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:

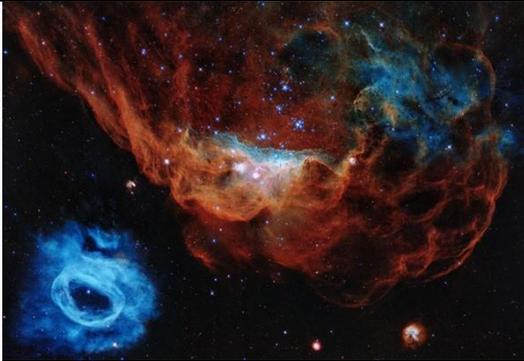
Please visit our website www.evansvilleastro.org and our Facebook page to keep yourself up to date for any changes.

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>

Hubble Peers Into Cosmic Reef.



NGC 2014 (right) and NGC 2020 are part of a larger star-forming complex in the Milky Way's largest satellite galaxy, the Large Magellanic Cloud.

Credit: NASA, ESA, and STScI

On April 24, NASA celebrated the 30th anniversary of the Hubble Space Telescope's launch with a star-studded image featuring NGC 2014 (right) and NGC 2020. These nebulae are part of a much larger star-forming complex located in the Large Magellanic Cloud. The structure is often called the Cosmic Reef, in part for NGC 2014's intricate, coral-like appearance. Within the colorful region is a bright group of young stars, each 10 times the mass of our Sun or more. These massive stars are blasting away the gas and dust from which they formed, carving away their birth nebula. The region's reddish color comes from glowing hydrogen and nitrogen gas, while bluer colors show oxygen gas energized by the stars' ultraviolet light.

Nearby, blue-hued NGC 2020 is generated by a single Wolf-Rayet star 15 times more massive than the Sun and 200,000 times as luminous. NGC 2020's color also comes from oxygen gas, which has been blown away from the central star and heated to roughly 19,800 degrees Fahrenheit (11,000 degrees Celsius)..

Hubble has made invaluable contributions to science and outreach, engaging scientists and the public alike with breathtaking views of our universe. Its scientific contributions include 1.4 million astronomical observations to date, with many more to come. NASA expects the telescope to remain operational through at least 2025, and its orbit will remain stable until the 2030s..

Long-term Spaceflight can cause lasting changes to the Brains and Eyes of Astronauts.



ESA astronaut Alexander Gerst takes a selfie during an EVA outside the International Space Station in 2014. New research shows that when astronauts spend extended periods of time in space, their brains and eyes can suffer.

Credit: NASA/SPL/Barcroft Media

Researchers have long known that astronauts experience significant physical changes during spaceflight. These changes were first seen in test animals that ventured — or, more accurately, were launched — into space before humans. But similar effects also were noted in Mercury astronauts soon thereafter.

To date, most of the research on how spaceflight affects the human body focuses on the muscles, bones, and hearts of astronauts. But many astronauts also report changes in their visual acuity following spaceflight — a condition known as spaceflight-associated neuro-ocular syndrome, or SANS. Astronauts with SANS can develop impaired short-distance vision, experience headaches, and/or see floating blurry spots known as scotomas.

Now, a new study has evaluated how long-term spaceflight is tied to common changes seen within the skulls of astronauts, which impacts both their brains and eyes. The researchers also investigated how these intracranial changes could be related to SANS, uncovering some surprising results.

June 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				

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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
June 21 st , 2020	June 28 th , 2020	June 5 th , 2020	June 13 th , 2020

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

EAS Meeting Minutes for April – 2020

The April, 17th, 2020 meeting was canceled due to the COVID -19 virus situations and therefore there are no minutes to report .

Respectfully Submitted – Dave Kube – Secretary