Observer

March

EVANSVILLE ASTRONOMICAL SOCIETY, INC. 2022

Evansville Astronomicle Observaatory Reopening 2022

It has been over 2 years since the last Public Event held at the Wahnsiedler Observatory. This year will hopefully be a change.The EAS board voted to have 2 Public Star Watches at the Observatory as well as a few events at the Museum. Check the schedule on our EAS website http://www.evansvilleastro.org for the 2022 schedule and for any updates. All dates a subject to current Covid restrictions at time of event and subject for cancellation.

Photo Courtesy: ***Dave Kube***

Inside this Issue…

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 2022 Officers and Contacts

President – Tony Bryan
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Vice President – Scott Conner

Secretary – Dave Kube
740.223.6854

Treasurer – Mitch Luman

Counselors
Mitch Luman (2020)
Michael Borman (2021)
Ken Harris (2022)

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 Zoom Meeting scheduled for 7:30 PM on Friday, March 18th, 2022.

EAS Update

Please Note: We have an In-Person Meeting scheduled for 7:30 PM on Friday, April 8th, 2022. Masks will be required at this time for all.

EAS Update

Please Note: We have a Zoom Meeting scheduled for 7:30 PM on Friday, May 20th, 2022.

EAS Update

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EAS Update:

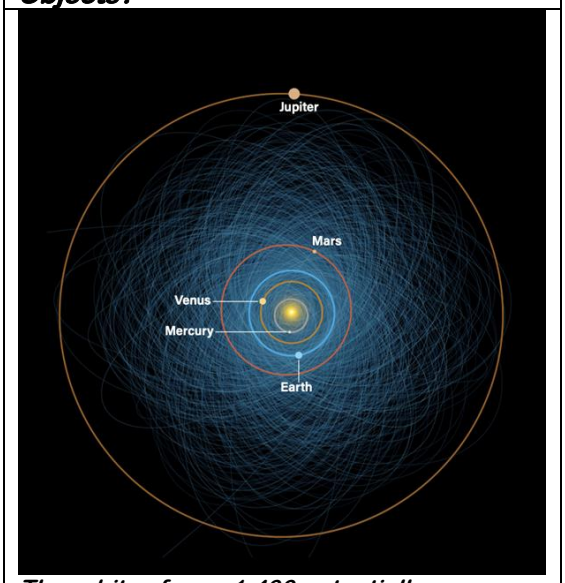
Please visit our website http://ww.evansvilleastro.org and our Facebook Group page to keep yourself up to date for any changes.

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

What are the largest Near-Earth Objects?



The orbits of over 1,400 potentially hazardous asteroids (PHAs) were mapped in this illustration, made in 2013. Nine years later, an additional 800 PHAs have been identified.

Credit: NASA/JPL-Caltech

Doomsday impactors are a staple of modern science fiction. The most famous real-world example of an impact wiping out much of the life on Earth is, of course, the object that took out the dinosaurs some 66 million years ago.

Thankfully, events of that magnitude are fairly uncommon, happening about once every few hundreds of millions of years. But the possibility is there, so space agencies around the globe have taken to monitoring the skies for near-Earth objects (NEOs). These objects are comets and asteroids whose orbits take them within 1.3 astronomical units (AU; where 1 AU is the average distance between Earth and the Sun) of our star .

On that note, the largest comets and asteroids tend to stay far enough away that we have very little to worry about. The largest asteroid considered a NEO is 1036 Ganymed. This asteroid is about 23 miles (37 kilometers) in diameter. With a closest solar approach of 1.24 AU, 1036 Ganymed is just within the minimum distance to categorize it as an NEO.

The largest comet in the sky today is 109P/Swift-Tuttle. At 16 miles (26 km), Swift-Tuttle is about twice the size of the object believed to have wiped out the dinosaurs. However, this comet poses little threat to us, as it makes its closest solar approach of 0.95 AU every 133 years. And, in fact, we have it to thank for the Perseid meteor shower .

It's actually the little guys that we need to be more concerned about, as they're more likely to sneak past our detection. Earth's closest encounter on record with a known NEO was with 2020 VT , which passed a mere 232 miles (375 km) above Earth's surface Nov. 13, 2020. The asteroid was spotted only after it made its closest approach. The previous closest asteroid, 2020 QG, had skimmed past Earth just three months before 2020 VT it, too, was not seen prior to its close pass .

Pioneer 10: It's been 50 years since NASA targeted Jupiter.

A painting by artist Rick Guidice shows Pioneer 10's path from Earth through the asteroid belt — which the hazards of crossing were unknown at the time — to Jupiter .

Credit: NASA

Launched from Cape Canaveral's Launch Complex 36A at 8:49 P.M. EST on March 2nd, 1972. Pioneer 10's encounter with Jupiter commenced on November 25th, 1973 from a distance of 7 million miles (11 million km), the craft began to detect intense radiation. It found that Jupiter's magnetosphere extended 4.3 million miles (6.9 million km) toward the Sun and likely wound backward, corkscrew-like, beyond Jupiter. Its strength was far greater than Earth's magnetosphere and tended to ebb and flow in rhythmic harmony with the planet's nearly 10-hour rotation .

As the spacecraft drew closer, the Great Red Spot popped into view: a churning anticyclonic storm far wider than Earth. Pioneer 10's data published in April 1974 hinted that the centuries-old spot was likely a towering mass of clouds, arising from thermal sources deep within the jovian interior.

Pioneer 10's whistle-stop tour of Jupiter officially ended Jan. 2, 1974. The brief visit nonetheless revealed much about the planet .

In Like a Lion, Out Like a Lamb
by Mitch Luman

March…in like a lion, out like a lamb. Who among us does not recall reciting at least once, these time-honored words? And why not. To many, the quoting of this passage year-after-year comes as natural to us as the wearing of green on St. Patrick's Day the playing of practical jokes on April 1st.

According to tradition, if the first week of spring comes roaring in with frigid cold, wind and snow, it will go out with welcome, warm, and mild days. Incidentally, the proverb is said to work the other way around too. Now just between you and me, there's no accepted basis for such claims. How could there be? This is just nonsense from a scientific point of view, but never-the-less, many will quote "in like a lion, out like a lamb" every spring. Whatever this adage may lack in its weather forecasting power, it gains in another way.

The real origins of this story are likely celestial, rather than meteorological. Today, as it has been throughout human history, March evenings find two well-known constellations in prominent locations in the sky. At the beginning March, the constellation Leo (the lion) can be found rising in the east while at the end of the month, Aires (the ram or lamb) is setting in the west just after sunset. The "in" in the saying likely refers to Leo's rising importance in the heavens (visible all night), where the "out" references Aries' decreasing celestial importance as it leaves the celestial stage right after twilight. Early western cultures who kept track of such things probably saw it that way. Because of the transitional nature of weather in the month of March as winter wanes, the phrase was likely co-opted over time as a weather predictor.

This month does indeed find Leo overhead. Look for this very prominent constellation rising in the east after sunset. You won't want to miss the bright star Regulus, the heart of the lion, located in the lower right portion of the constellation. A nearly Full Moon will be between us and the stars of the lion the evenings of March 15-16, which provides a great cheat in finding Leo. The constellation Aries will be tough to view no matter what season or time of night. Although it is one of the twelve constellations of the Zodiac, Aires is composed of mainly faint stars. To locate Aires, once it is dark enough after sunset, face west and try to spy a dogleg of 3-4 dim stars tightly arranged just above the horizon.

As we wait to see what kind of schizophrenic weather awaits us during the remainder of March, you can receive a beginner's tour of the skies of spring in the Evansville Museum's weekly planetarium show, Skies Over Evansville, each Saturday afternoon.

April 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8 In Person Mtg 7:30 Museum	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Up and Coming Events 2021

Please Note we have a Zoom Meeting scheduled for 7:30 PM on Friday, March 18th, 2022.

Please Note we have an In-Person Meeting scheduled for 7:30 PM on Friday, April 10th, 2022 @ the Evansville Museum – Masks will be Required

Please Note we have a Zoom Meeting scheduled for 7:30 PM on Friday, May 20th, 2022

Please visit our Web Page http://www.evansvilleastro.org or our Facebook Group Page for updates

Events may be cancelled due to Covid at time of event

Moon Phases

New Moon	First Quarter	Full Moon	Third Quarter
April 1st, 2022 April 30th, 2022	April 9th, 2022	April 16th, 2022	April 23rd, 2022

Moon Phases courtesy of Time and Date.com

EAS Meeting Notes for February – 2022

On February 18th,2022 the EAS held a zoom meeting for members and invited those from our Facebook Group to participate as well. The meeting began @ 7:36 pm.

Chuck Allen introduced our guest speaker for the evening, David Collier from the Indiana Astronomical Society. David's presentation was called "Remote Observing Using Telescopes Available Over the Internet." He demonstrating two different subscription services (iTelescope.net, Telescope.Live) that are available at reasonable prices.

Dave walked us through setting up image collection on both of these services and showed us the telescopes available on each network.

This was a very informative presentation and has many benefits to us. Able to image the Southern Hemisphere or Image when it is cloudy or cold.

Respectfully Submitted – Dave Kube – Secretary