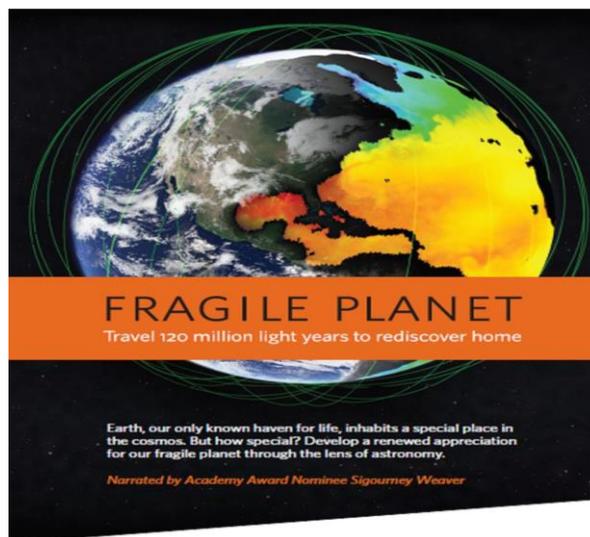


EAS March Meeting has Changed

We realize that it is short notice, but the EAS meeting for March 2014, will take place on Saturday March 22nd at 7:30 and will be held at the Evansville Museum in the new Immersive Theater.

Mitch Luman has promised that the program “Fragile Planet” narrated by Sigourney Weaver will be worth the price of admission (free to the club for this meeting only). Come and enjoy.

At this moment this is the only EAS meeting scheduled this year, but the board has scheduled 2 Public Star Watches at the museum as well. Please see the full EAS schedule at the end of this newsletter for full details.



Inside this Issue.....

- 2 – Local Events and information
- 3 – News around the Globe
- 4 – April Calendar/ Events
- 5 – Cosmos return to TV
- 6 – EAS Business – Minutes
- 7 – EAS 2014 Schedule

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 2014 Officers and Contacts

President – Scott Conner
812-.604.7164
ssconner24@gmail.com

Vice President – Tony Bryan

Secretary – Charleen Kaelin
812.303.1711

Treasurer – Ted Ubelhor

Counselors
Michael Borman
Kent Brenton
Ken Harris

Webmaster – Michael Borman

Program Director
Tony Bryan

News editor – David 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:

The March Meeting Date and Location has changed. We will meet on Saturday, March 22, 2014 at the Downtown Evansville Museum. This is change from our Observatory on Friday, March 21st. The meeting time is the same and will be at 7:30pm Evansville time.

The final full schedule has been approved by the board and a copy is on the last page of this newsletter.

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>

There is currently no update regarding the mount as we are waiting on the crane company to give us confirmation and a date.

There was a PSW held at the Observatory on Saturday March 8th at 7:00pm. There were no visitors, so it was decided that we not do any presentation. Scott Conner, Tracie and myself we there in case we were needed. The skies were cloudy and there would have not been any viewing.

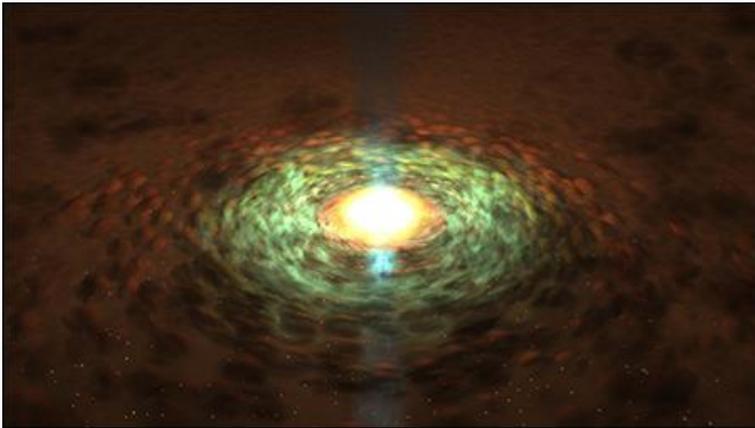
NASA's Kepler mission announces 715 new worlds



NASA

Using a new verification technique to analyze Kepler's first two years of data, astronomers have confirmed hundreds of new worlds in multiple-planet systems

RXTE reveals the cloudy cores of active galaxies



Wolfgang Steffen, UNAM

Picture a single cloud large enough to span the solar system from the Sun to beyond Pluto's orbit. Now imagine many such clouds orbiting in a vast ring at the heart of a distant galaxy, occasionally dimming the X-ray light produced by the galaxy's monster black hole. Using data from NASA's Rossi X-ray Timing Explorer (RXTE) satellite, an international team has uncovered a dozen instances where X-ray signals from active galaxies dimmed as a result of a cloud of gas moving across our line of sight. The new study triples the number of cloud events previously identified in the 16-year archive.

Chandra and XMM-Newton provide direct measurement of distant black hole's spin



NASA/CXC/Univ. of Michigan/R. C. Reis, et al.; Optical: NASA/STScI

Astronomers have used NASA's Chandra X-ray Observatory and the European Space Agency's (ESA) XMM-Newton to show a supermassive black hole 6 billion light-years from Earth is spinning extremely rapidly. This first direct measurement of the spin of such a distant black hole is an important advance for understanding how black holes grow over time. Black holes are defined by just two simple characteristics -- mass and spin. While astronomers have long been able to measure black hole masses very effectively, determining their spins has been much more difficult.

April 2014

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|---|------------------------------------|
| | | 1 | 2 | 3 | 4 PSW 7:00pm Museum | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 Dome Repair Day 9:30am |
| 13 | 14 | 15 | 16 | 17 | 18 Regular Meeting 7:30pm Observatory | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | | | |

Generated by FreeHTMLCalendar.com Copyright © 2011 John Dalbey.

Up and Coming Events 2014

Regular Meeting - Saturday, March 22, 2014 @ 7:30pm @ Museum

PSW - Friday, April 4, 2014 @ 7:00pm @ Museum – Bring your own Scopes

Dome Repair Day - Saturday, April 12, 2014 @ 7:30pm – This is tentative dependent on the Mount

Regular Meeting – Friday, April 18, 2014 @ 7:30pm @ Observatory

Moon Phases

| First Quarter | Full Moon | Third Quarter | New Moon |
|---------------|--------------|---------------|--------------|
| Apr 7, 2014 | Apr 15, 2014 | Apr 22, 2014 | Apr 29, 2014 |

[Moon Phases courtesey of Time and Date.com](http://Time and Date.com)

Cosmos has returned to broadcast television. The first episode was a hit and I personally enjoyed the presentation. Not only is it on broadcast network TV, but there is also an app (imagine that – an app for that). From FOX’s website there is a slew of things. If you have not watched the first episode it is available on demand as well.



Quest for Students, Episode 1

Written by Ann Druyan
Produced by Cosmos Studios

Overview

Episode 1, “Standing Up in the Milky Way,” tells the story of how the human species established our location in the vastness of the universe and the sweep of cosmic time. To further personalize the experience, we propose the following activities in order of increasing sophistication:

- Find your own birthday on the Cosmic Calendar.
- Earn a learner’s permit to drive your own Ship of the Imagination.
- Select a destination in the cosmos, giving the coordinates in space and time. Present your research and write or draw a vision of what it would be like.

Grade Levels

6-12

Episode Summary

The Ship of the Imagination, unfettered by ordinary limits on speed and size, can take us anywhere in space and time. It has been idling for more than three decades, and yet it has not been overtaken. Its global legacy remains vibrant. Now, it’s time once again to set sail for the stars. The entrance requirement: adherence to the rules of the method of science. After a whirlwind tour of our solar system ending as we pass Voyager 1, we’re introduced to the Cosmic Calendar: all of time is compressed into a year-at-a-glance calendar, with each month representing a little more than a billion years.



Courtesy Cosmos Studios and the Fox Broadcasting Company

EAS Meeting Minutes – February 21, 2014

The E.A.S. meeting of February 21, 2014 was called to order at 7:34 pm by President Scott Conner. There were 13 members and 3 guests present.

It was voted to accept the minutes as printed in the February newsletter.

The VP Tony Bryan told us about scheduled events:

Board Meeting Sun., Feb 23 1:30pm @ Mike Borman's

Regular Meeting Fri., Mar 21 7:30pm

*Editor's Note: the EAS Regular meeting has changed to Saturday, March 22nd @ 7:30pm and will be held at the downtown Evansville Museum.

Our new Treasurer Ted Ubelhor, told us about the finances. He is currently transferring funds, and updating the records to be a more uniform and easier to manage system.

Special Projects: Scott talked to powers welding. They said so far the weather has not cooperated with them on our project. They are supposed to see what it cost to do it on the weekend. Scott told them that we really need some notice on doing the lift. He has not called Scott back yet. Since weather is an issue, we may actually have the scope down for some time, since weather could cancel us. And a reschedule may be weeks later. Scott still has to make the dovetail mount for the scopes, but the mount is done painted and in his garage.

Nothing new to report on the Crane Educational partnership.

OLD BUSINESS -

We really don't have any old business to discuss.

New Business –

We have been asked to do a program at Beal Woods State Park in Illinois again this year. We have been asked to look at our calendar and decide what date would work for us. We will likely discuss this as well at the board meeting, so if you think you can help out with the event you may want to let me know so we can have some preliminary dates before then.

Astronomy Day has moved to May 17th. And will be Audubon in the evening.

We have been asked to do an Astronomy Night at Delaware School. They want it any night during the week of March 17th. Can anyone help out and what date is best.

We were asked if we could do a program in March for a large pack of scouts from Aldersgate UMC. They would expect around 100 to 150 people. At this point we would have to decline this event because we may be in the middle of telescope renovations, and we have many events scheduled.

We have been asked if we could provide telescopes at a high school retreat in New Harmony sometime between March 19-21st. They would provide \$5 per student as a donation. They want to no if we may be interested in doing this several times each year. The club decided that the best date would be Tuesday the 20th.

Board Meeting this Sunday at Mike Borman's House 1:30pm

The meeting was adjourned at 7:56 pm and was followed by a program by University of Illinois Astronomer Jason Harris. His program was about Finding Young Binary Stars.

EAS Schedule 2014

| | | |
|---------------------------------|-------------------------|---|
| Regular Meeting | Friday, Jan 17th | 7:30pm |
| Regular Meeting | Friday, Feb 21st | 7:30pm |
| PSW | Saturday March 8th | 7:00 pm |
| Family Astronomy Night | Tuesday, Mar 18th | Dusk - Delaware Schools Evansville |
| Stargazers Workshop | Friday, March 21st | New Harmony |
| Regular Meeting | Saturday, Mar 22nd | 7:30pm @ Museum |
| PSW | Friday, April 4th | 7:00pm @ Museum |
| <i>Dome repair Day</i> | <i>Sat., April 12th</i> | <i>9:30am</i> |
| Regular Meeting | Friday, April 18th | 7:30 pm |
| Regular Meeting | Friday, May 16th | 7:30pm |
| Astronomy Day | Sat., May 17th | @ Museum 11 am – 5 pm Audubon 7:30-10pm |
| EAS Picnic | Sat., May 31st | 6:00pm @ Observatory With PSW 8:30 |
| Patoka Lake (23 rd) | Sat Jun. 28th | 6:00pm Patoka Lake - Rain date July 19th |
| Regular Meeting | Friday, July 18th | 7:30pm |
| PSW | Saturday, Aug 2nd | 8:00pm |
| Regular Meeting | Friday, Aug 15th | 7:30pm |
| Regular Meeting | Friday, Sep 19th | 7:30pm |
| Ferdinand Folk Festival | Saturday, Sept 20th | 11 am - EDT |
| PSW | Friday, Sept 26th | 7:00pm @ Museum |
| Cleanup Day | Sat., Oct 4th | 2:00 pm |
| Regular Meeting | Friday, Oct 17 | 7:30pm |
| PSW | Sat., Nov 1st | 7: 30pm |
| Regular Meeting | Friday, Nov 21st | 7:30pm |
| Regular Meeting | Friday, Dec 19th | 7:30pm (Mike Borman Quiz Master) |

Dome Repair Day is tentative – Dependent upon Crane availability

Daylight savings Time Begins Sun, Mar 9 2:00am
Daylight Savings Time Ends Sun, Nov 2 2:00am

Events in Red are at the Observatory.
Events in Black are not at the observatory.