

Losmandy HGM Titan equatorial mount



Celestron CGE Pro equatorial mount



Recently, Jim Havens, one of our members and founder of the Havens' Foundation has offered to help pay for a new telescope mount in the dome. This offer was extended to our club because of our long record of public outreach done here at the observatory. This mount was first mentioned as a long term goal for the club earlier this year, and now looks like it will actually become a reality much sooner.

Here is where we stand at this point. We have tentatively developed a plan for the removal of the old mount. The design for modifying the current pier to attach the new mount has tentatively been made, and has had some review by mechanical engineers. We have not decided on a mount system as of yet. We are looking for a mount with 100-pound capacity at a minimum. There are several mounts that have that capacity, but they would require more money than we will get from the grant. So, the club would have to come up with the remaining cost, if we go with one of those mounts. However, there are two mounts that fall close to the grant amount: the [Titan mount](#) (above left) and the [Celestron CGE Pro](#) mount (above right).

Our current plans will be to mount the Celestron 14" SCT reflector and a new 120 mm refractor on this mount. We hope to get a final decision on what mount to go with in the coming months. We welcome any comments as well as any donations toward this project. Any extra funds collected, that are not needed for the mount project, will be used for the telescope fund to purchase a refractor and/ or other equipment needed to complete this project. If you do make a donation, please specify it as "telescope fund".

Submitted by Scott Conner.

Editor's note: See page 2 for Ken Harris' summary of a meeting held early last month. The need for submitting a project plan by mid-December is no longer a requirement.

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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: [gneireiter@wowway.com](mailto:gneireiter@wowway.com)

## Local Events and Information

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 for 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 2012 Officers and Contacts

President - Scott Conner 812.604.7164  
[ssconner24@gmail.com](mailto:ssconner24@gmail.com)

Vice President - Tony Bryan

Secretary - Charleen Kaelin 812.303.1711

Treasurer - Scott Bishop

Counselors - Michael Borman, Kent Brenton, and Ed Erickson

Webmaster - Michael Borman

Program Director - open

Newsletter Editor - George Neireiter  
812.629.7822 [gneireiter@wowway.com](mailto:gneireiter@wowway.com)

For more information about EAS or directions to the Observatory, visit the club's web page:  
<http://www.evansvilleastro.org/>



**Telescope Upgrade...** On Sunday Nov. 4th at 2:15 pm, the following members of the EAS met at Mike Borman's house to discuss a new mount for the observatory: Ted Ubelhor, Tony Bryan, Scott Conner, Dave Kube, Mike Borman, Ken Harris, and Kent Brenton. The discussion about the mount focused on the size, mounting possibilities, amount of weight it would hold, and the ease of use. The Paramount ME-2 seemed to be the best choice for our purposes based on the previous items discussed. Scott proposed having the gentleman who would be donating the money for this project come to our next meeting, look at our current setup, then give us his thoughts about the project.

The possibility of asking for donations from individuals and businesses was also mentioned as there will be other expenses that will need to be covered in order finish out this mount / telescope upgrade for the club. Our proposal will need to be in by the middle of December in order to be included in the next years budget. Hopefully, everything can be completed in time, and we can begin to plan on replacing the 1960's mount early next year. This upgrade will help make our club facilities much easier to use and, I believe, will lead to an increase in our membership using them. More information will come as we get closer to finalizing our plans. If anyone has any suggestions please feel free to contact any of the members who are involved in this endeavor. Submitted by: Ken Harris

**Telescope for SALE:** 20" Starmaster with Zambuto optics. Loaded with all options, plus the observers chair. Purchased August 2007. Tuned up this summer by Rick Singmaster (of [Starmaster Portable Telescopes](#)). Includes 12, 17, and 35 mm Televue eyepieces and 2x Televue Barlow. Retail today would be over \$16,572. Make reasonable aftermarket offer. Contact: Mike Sterling in Kansas City, MO for full details at 816-616-6475... (with new heart stints and foot problems I need smaller scope). Per e-mail note, Mike is an elementary school teacher and is having heart problems. He will deal fairly. Submitted by Scott Bishop.

# EAS OBSERVER NEWSLETTER

## January 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4 Last 	5
6	7	8	9	10	11 New 	12
13	14	15	16	17	18 Regular Mtg. First 	19
20	21	22	23	24	25	26 Full 
27	28	29	30	31		

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### December Events (reminder)....

Regular Meeting      Dec. 21 (Friday) 7:30 pm      Wahnsiedler Observatory  
 Holiday Party and Astro Quiz (with Mike Borman as Quiz master)

### January Events...

Regular Meeting      Jan. 18 (Friday) 7:30 pm      Wahnsiedler Observatory

### Moon phase times (Evansville local time)

third quarter	9:58 p	Jan 4	first quarter	5:45 p	Jan 18
new	1:44 p	Jan 11	full	10:39 p	Jan 26

courtesy of [Time and Date](http://Time and Date)

## It Takes More Than Warm Porridge to Make a Goldilocks Zone

By Diane K. Fisher

The “Goldilocks Zone” describes the region of a solar system that is just the right distance from the star to make a cozy, comfy home for a life-supporting planet. It is a region that keeps the planet warm enough to have a liquid ocean, but not so warm that the ocean boils off into space. Obviously, Earth orbits the Sun in our solar system’s “Goldilocks Zone.”

But, there are other conditions besides temperature that make our part of the solar system comfortable for life. Using infrared data from the Spitzer Space Telescope, along with theoretical models and archival observations, Rebecca Martin, a NASA Sagan Fellow from the University of Colorado in Boulder, and astronomer Mario Livio of the Space Telescope Science Institute in Baltimore, Maryland, have published a new study suggesting that our solar system and our place in it is special in at least one other way.

This fortunate “just right” condition involves Jupiter and its effect on the asteroid belt.

Many other solar systems discovered in the past decade have giant gas planets in very tight orbits around their stars. Only 19 out of 520 solar systems studied have Jupiter-like planets in orbits beyond what is known as the “snow line” — the distance from the star at which it is cool enough for water (and ammonia and methane) to condense into ice. Scientists believe our Jupiter formed a bit farther away from the Sun than it is now. Although the giant planet has moved a little closer to the Sun, it is still beyond the snow line.



So why do we care where Jupiter hangs out? Well, the gravity of Jupiter, with its mass of 318 Earths, has a profound effect on everything in its region, including the asteroid belt. The asteroid belt is a region between Mars and Jupiter where millions of mostly rocky objects (some water-bearing) orbit. They range in size from dwarf planet Ceres at more than 600 miles in diameter to grains of dust. In the early solar system, asteroids (along with comets) could have been partly responsible for delivering water to fill the ocean of a young Earth. They could have also brought organic molecules to Earth, from which life eventually evolved.

Jupiter’s gravity keeps the asteroids pretty much in their place in the asteroid belt, and doesn’t let them accrete to form another planet. If Jupiter had moved inward through the asteroid belt toward the Sun, it would have scattered the asteroids in all directions before Earth had time to form. And no asteroid belt means no impacts on Earth, no water delivery, and maybe no life-starting molecules either. Asteroids may have also delivered such useful metals as gold, platinum, and iron to Earth’s crust.

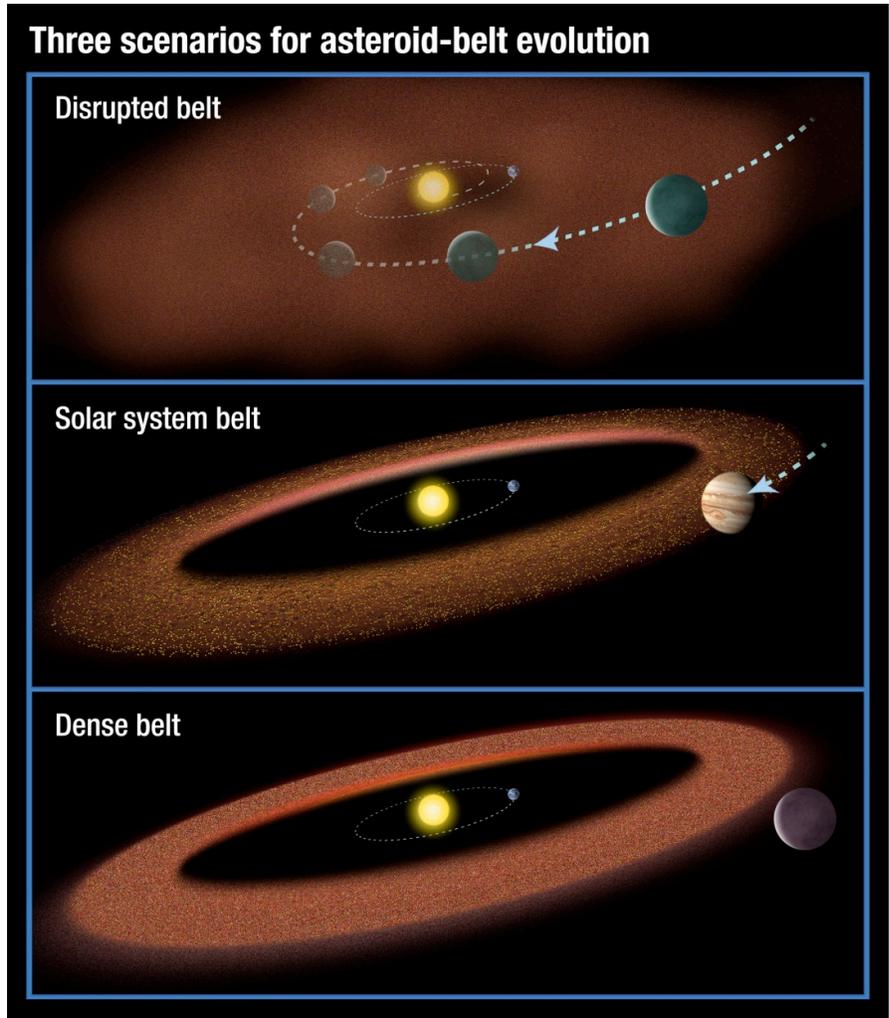
But, if Jupiter had not migrated inward at all since it formed farther away from the Sun, the asteroid belt would be totally undisturbed and would be a lot more dense with asteroids than it is now. In that case, Earth would have been blasted with a lot more asteroid impacts, and life may have never had a chance to take root.

The infrared data from the Spitzer Space Telescope contributes in unexpected ways in revealing and supporting new ideas and

theories about our universe. Read more about this study and other Spitzer contributions at [spitzer.caltech.edu](http://spitzer.caltech.edu). Kids can learn about infrared light and enjoy solving Spitzer image puzzles at [spaceplace.nasa.gov/spitzer-slyder](http://spaceplace.nasa.gov/spitzer-slyder).

*This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.*

*Right: Our solar system is represented by the middle scenario, where the gas giant planet has migrated inward, but still remains beyond the asteroid belt.*



## Upcoming Programs...



**December 21....**

**Holiday Party and Astro Quiz  
with Mike Borman as Quiz Master**

# EAS OBSERVER NEWSLETTER

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## *EAS Meeting Minutes -- November 16, 2012*

The meeting was CALLED TO ORDER by President Scott Conner at 7:36 PM with 16 members in attendance.

It was moved and seconded to approve the MINUTES of the previous month as seen on the EAS Internet page. [WWW.EVANSVILLEASTRO.ORG](http://WWW.EVANSVILLEASTRO.ORG)

Tony Bryan announced the UPCOMING EVENTS:

Regular Meeting (Christmas Party / AstroQuiz)	Friday, December. 21	7:30 PM
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There were no visitors.

Scott Bishop, Treasurer, reported that the finances look good. He reminded attendees that Astronomy wall CALENDARS and desk calendars are available for \$7.00 and \$20.00 respectively.

He also mentioned that the RENEWAL TIME for our CD is coming up in the early part of next year. They earned a minimal amount of interest. It was suggested to find another medium for this investment, and that issue will be discussed at the next Board meeting.

**SPECIAL PROJECTS** -- The president said there is more work to be done in the DOME like painting and such. Supplies are available. This will have to be a Spring event.

**OLD BUSINESS** -- Mike Vanatter, Glen Bye and Ted Ubelhor helped out at the HARVEST FEST at Wesselman Woods attended by 200 – 300 people. They were able to view the moon, M13, M57, and Albireo until about 9:00 pm.

**NEW BUSINESS** -- EAS is still in need of a NEW MOUNT for the dome. Several possible candidates are: Losmandy Titan, Paramount, or Celestron. We may need some additional funds.

Also needed is a REFRACTOR – Dual Scope System for close-up viewing of the planets.

The president reminded the members that he plans to retire as president at the end of the Year. HOWEVER, since there are no volunteers, SCOTT HAS VOLUNTEERED TO REMAIN AS PRESIDENT FOR ONE MORE YEAR.

Lastly, our December meeting is our annual CHRISTMAS PARTY and ASTRONOMY QUIZ to be held at the observatory. Bring a SIDE DISH or DESSERT. Mike Borman will be the Quiz Master.

**PROGRAM FOR TONIGHT** -- Mitch Luman's presentation: "Update on the Museum Renovations"

Respectfully submitted, Charleen Kaelin, Secretary

**Additional note** by Scott Conner regarding the election of officers... We did have an election. It was proposed to keep the slate as is except for electing Ken Harris to fill one of the Counselor positions vacated by the death of Ed Erickson last year. Attendees at the meeting were asked who was in favor, and it was an overwhelming majority for yes. <reference e-mail from S. Conner to editor on 12.06.12>