

Ferdinand Folk Festival... On September 21, Mike Borman, Tony Bryan, Dave Kube, and Ted Ubelhor represented EAS at the Ferdinand Folk Festival and provided solar viewing with four telescopes.

Per Dave, it was an excellent day with great weather. I know Mike, Ted, Tony, and I talked with over 200 visitors. There were a lot of interested people from the area. I got the sense after doing this for four years that we are getting a following -- just like Patoka Lake -- almost expected that we are going to be there. There were vendors and rides in addition to the great music at the stage. With the good food, music and visitor interest, this is a fun event.



Inside this Issue...

- 2 - Local Events and Information
- 3, 4 - Pictures from the Ferdinand Folk Festival
- 5 - November Calendar/ Events
- 6 - Hunting for a Supernova
- 8 - Upcoming Program
- 9, 10 - Minutes of September meeting

Mike commented: Great music and solar observing are a good combination! Not sure how many people were there. If I were to guess, it was well over a thousand. We had quite a few people ask for additional information on the club. Fortunately, I had printed out several copies of the handout PDF (available on the EAS web site).

See pictures below and on pages 3 and 4, courtesy of Dave Kube and Mike Borman.



Mike Borman

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

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 2013 Officers and Contacts

President - Scott Conner 812.604.7164
ssconner24@gmail.com

Vice President - Tony Bryan

Secretary - Charleen Kaelin 812.303.1711

Treasurer - Scott Bishop

Counselors - Michael Borman, Kent Brenton, and Ken Harris

Webmaster - Michael Borman

Program Director - open

Newsletter Editor - George Neireiter
812.629.7822 gneireiter@wowway.com

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



Local Events and Information

Telescope mount upgrade status... Scott Conner recently created 3D drawings to show exactly where to put the mount on the new pier. The drawings were presented at the September regular meeting for member viewing and input. Scott stated that he will be taking member feedback regarding the design for about three weeks. Then, the build begins.

Scott also brought the mount to the meeting for show. Indeed, it is large and appears well engineered. The excitement level was high !

We are still a little bit short of our project's financial goal. If you haven't contributed, please help out and make a contribution. While there have been some large donations of \$200 or more, your gift of \$25 or \$30, or even \$50, would help us achieve the total amount.

Please send your check to Scott Bishop, Treasurer, at: E.A.S., P.O. Box 3474, Evansville, IN, 47733. Or, even better, come to the next meeting (Sept. 20) and personally deliver your support of E.A.S. and its mission. Thank you.

Telescopes and accessories for sale...

As mentioned in last month's issue, Mike Borman still has some telescope equipment and 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>

Submitted by Mike Borman

Perkins Observatory... As a follow up to the excellent presentation by Dave Kube at the September regular meeting, Dave provided two web links for further exploration of the well-traveled 69" mirror at the Perkins observatory and the Big Ear radio telescope which used to reside just north of Columbus, Ohio.

Perkins Observatory Main Website
<http://perkins.owu.edu/index.htm>

The Radio Telescope (Big Ear)
<http://www.bigear.org/default.htm>

Opportunities for Volunteers... We have been asked to provide some telescopes at **Wesselman Woods** Nature Preserve at dusk on Oct 26th. Also, Astronomy night at **Delaware School** will be next month, most likely the second week between the 12-14th. It will also be at dusk. Please let Scott Conner know if you can help.

Ferdinand Folk Festival images



Dave Kube

Above: Ted Ubelhor helps visitors safely view the Sun with his Celestron telescope.
Below: Dave Kube captures the attention of two “future astronomers”.



Mike Borman

Ferdinand Folk Festival images



Mike Borman

Above: The Evansville Astronomical Society information booth.
Below: Mike Borman, Ted Ubelhor, and Tony Bryan enjoying the sunny day.



Dave Kube

EAS OBSERVER NEWSLETTER

November 2013

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

Generated by FreeHTMLCalendar.com Copyright © 2011 John Dalbey.

October Events (reminder)....

Fall/ winter Cleanup Oct 12 (Saturday) 3:00 pm Wahnsiedler Observatory
(with member observing to follow)

PSW Oct 12 (Saturday) 7:30 pm Wahnsiedler Observatory

Regular Meeting Oct 18 (Friday) 7:30 pm Wahnsiedler Observatory
(nominations for Officers)

November Events...

Regular Meeting Nov 15 (Friday) 7:30 pm Wahnsiedler Observatory
(election of Officers)

Comet ISON watch Nov 30 (Saturday) 5 pm ?? (tentative)

Moon phase times (Evansville local time)

New Moon Nov 3 6:50 am First quarter Nov 9 11:58 pm

Full Moon Nov 17 9:16 am Last quarter Nov 25 1:29 pm

courtesy of [Time and Date](#)

How to hunt for your very own supernova !



By Dr. Ethan Siegel

In our day-to-day lives, stars seem like the most fixed and unchanging of all the night sky objects. Shining relentlessly and constantly for billions of years, it's only the long-term motion of these individual nuclear furnaces and our own motion through the cosmos that results in the most minute, barely-perceptible changes.

Unless, that is, you're talking about a star reaching the end of its life. A star like our Sun will burn through all the hydrogen in its core after approximately 10 billion years, after which the core contracts and heats up, and the heavier element helium begins to fuse. About a quarter of all stars are massive enough that they'll reach this giant stage, but the most massive ones -- only about 0.1% of all stars -- will continue to fuse leaner elements past carbon, oxygen, neon, magnesium, silicon, sulphur and all the way up to iron, cobalt, and, nickel in their core. For the rare ultra-massive stars that make it this far, their cores become so massive that they're unstable against gravitational collapse. When they run out of fuel, the core implodes.

The in-rushing matter approaches the center of the star, then rebounds and bounces outwards, creating a shockwave that eventually causes what we see as a core-collapse supernova, the most common type of supernova in the Universe ! These occur only a few times a century in most galaxies; but because it's the most massive, hottest, shortest-lived stars that create these core-collapse supernovae, we can increase our

odds of finding one by watching the most actively star-forming galaxies very closely. Want to maximize your chances of finding one for yourself ? Here's how.

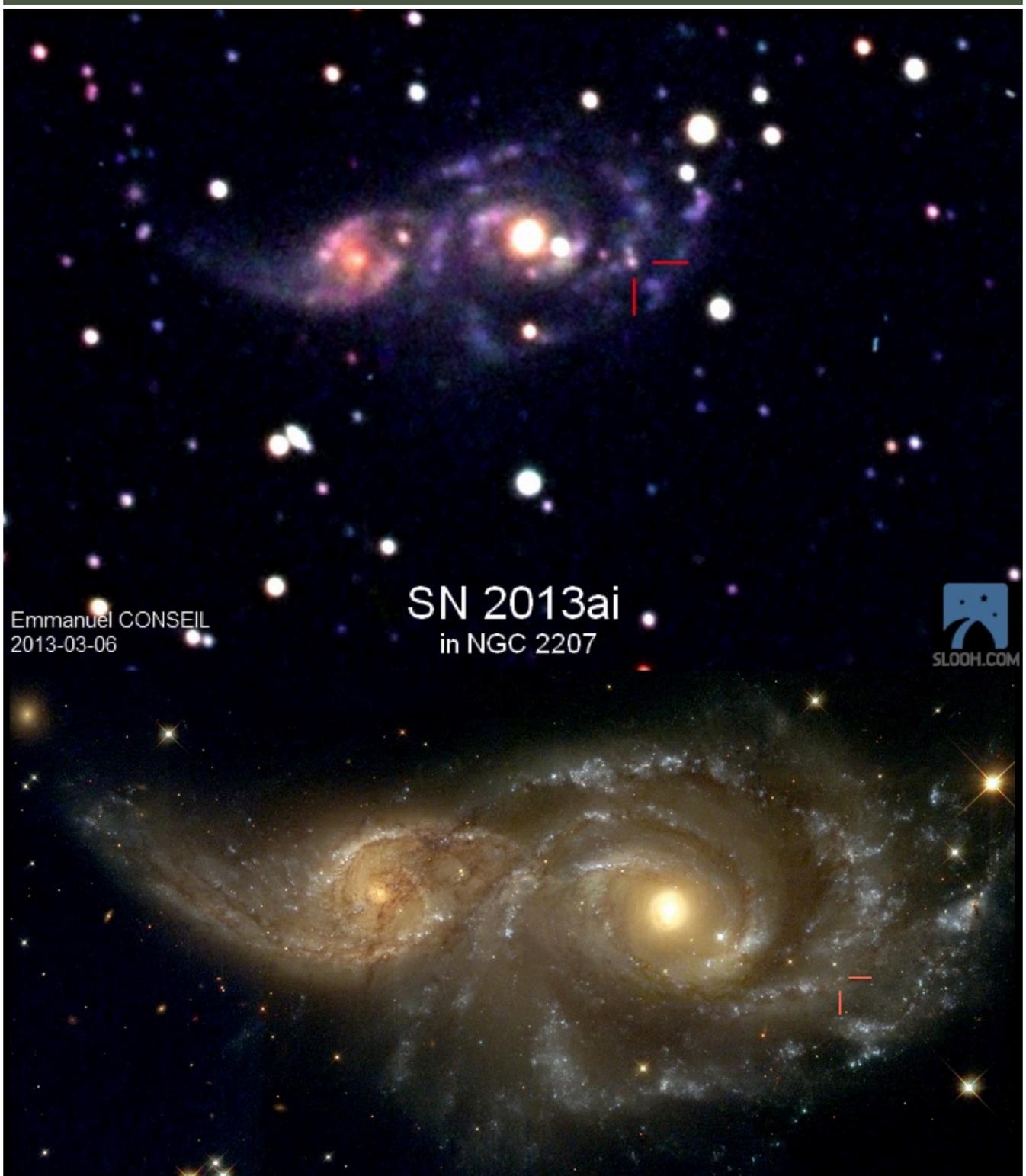
Pick a galaxy in the process of a major merger, and get to know it. Learn where the foreground stars are, where the apparent bright spots are, and what its distinctive features are. If a supernova occurs, it will appear first as a barely perceptible bright spot that wasn't there before, and it will quickly brighten over a few nights. If you find what appears to be a "new star" in one of these galaxies and it checks out, report it immediately; you just might have discovered a new supernova !

This is one of the few cutting-edge astronomical discoveries well-suited to amateurs. Australian Robert Evans holds the all-time record with 42 (and counting) original supernova discoveries. If you ever find one for yourself, you'll have seen an exploding star whose light traveled millions of light-years across the Universe right to you, and you'll be the very first person who's ever seen it !

Read more about the evolution and ultimate fate of the stars in our universe: <http://science.nasa.gov/astrophysics/focus-areas/how-do-stars-form-and-evolve/>.

While you are out looking for supernovas, kids can have a blast finding constellations using the Space Place star finder: <http://spaceplace.nasa.gov/starfinder/>.

See images and caption on next page.



Emmanuel CONSEIL
2013-03-06

SN 2013ai
in NGC 2207



Top... SN 2013ai, via its discoverer, Emmanuel Conseil, taken with the Slooh.com robotic telescope just a few days after its emergence in NGC 2207.

Bottom... NASA, ESA and the Hubble Heritage Team (STScI) of the same interacting galaxies prior to the supernova.

Upcoming Program...

October

Date: Friday the 18th, at about 8:15 pm, following the Business Meeting

Presenter: Victor Lopez

Topic: The History of the Birr Telescope in Ireland

In 1845, the Third Earl of Rosse designed and built the largest telescope in the world. This 72" telescope remained the largest in the world for over 70 years.



EAS OBSERVER NEWSLETTER

EAS Meeting Minutes -- September 20, 2013

E.A.S. MEETING was called to order at 7:38 pm on September 20, 2013 by President Scott Conner. There were a sixteen members present and two guests.

The minutes from the August meeting were voted unanimously to be accepted as written in the September newsletter.

Vice President Tony Bryan told us about the following upcoming events:

Ferdinand Folk Festival	Saturday, Sep 21	11 am - ?
Fall Cleanup / PSW	Saturday, Oct 12	3:00 pm with sandwiches and, 7:30pm member observing and PSW
Regular Meeting	Friday, Oct 18	7:30pm
Regular Meeting	Friday, Nov 15	7:30pm

The visitors were introduced.

Treasurer Scott Bishop told us about the finances. He also mentioned that monthly calendars are now for sale. He stated that weekly calendars would be ordered in November; so if you would like one, please let him know before mid-November. He also mentioned he would like to step down at the end of the year. If you are interested in the position, let him know.

The Mount Design is nearing completion. Scott brought pictures showing what is proposed for the pier. Final approval is needed so he can start production in about three weeks. After the program we can discuss the design with anyone concerned.

OLD BUSINESS

We had a PSW on September 7th here at the observatory. Ken Harris, Dave Kube, and Ted Ubelhor were there for the event. Ken did the slide show and answered questions. Dave opened the dome and managed the telescope, while Ted set up his own telescope outside. Due to clouds, not much observing was done. However, there were lots of questions about types of telescopes, location of constellations, and identification of some of the brighter stars that were visible between the clouds. The visitors stayed until about 10 pm. Despite the cloudy weather, many of the visitors said they would like to return for another opportunity.

NEW BUSINESS

We are going to set up a tent at "The Ferdinand Folk Festival" on Saturday, September 21 beginning around 11 am. We are looking for members to help man the tent to give out free stuff, answer questions, and provide solar observing with their telescopes. This is our 3rd year in attendance, and the Festival typically has good crowds and good music. I will have a map available in the next newsletter as well as on the EAS Facebook site.

EAS OBSERVER NEWSLETTER

Don't forget the fall/winter cleanup is coming up on Saturday October 12th. We will be starting with the cleanup about 3 pm. After the cleanup, we will have sandwiches for supper. A member observing session and the last PSW of the year will start at 7:30 pm.

If you are looking to purchase a telescope, there are several available from members and from other individuals. Stay tuned to the newsletter for more details.

Tony Bryan stated that there was no new information on the status of the Crane - EAS Educational Partnership.

We need to decide who gets the portable dome that was given as a prize for people who donated to the telescope mount fund. I only received one name (Ted Ubelhor) who expressed an interest in it. Based on members in attendance, it was decided that Ted should have the portable dome.

Scott Conner stated that he is currently in the process of setting up a date in November to do an astronomy night for the 6th graders at Delaware School. He will email out information on the date when one has been set.

Don't forget this month we are collecting dues for this year. If you have not paid your dues, you can send them to: EAS, P.O. Box 3474, Evansville, IN 47733. The dues are \$40 per year for family, and \$35 per year for single.

Victor Lopez gave a brief preview of his talk for the October meeting. The topic is *The History of the Birr Telescope in Ireland*. Victor mentioned that in 1845 the 3rd Earl of Rosse designed and built the largest telescope in the world. With a primary mirror of 72" in diameter, the Birr telescope remained the largest for over 70 years.

The meeting was adjourned at 8:11 pm and was followed by a program given by David Kube. The topic of his program was a *The Perkins Observatory -- a Tour and History*.

Respectfully Submitted,

Ted Ubelhor
Acting Secretary

... with contributions from Scott Conner and George Neireiter.