OBSERVER
NEWSLETTER

Evansville Astronomical Society, Inc.

February

P.O. Box 3474 Evansville, In. 47733

2011

Shot with 10" LXD 55 Schmidt Newtonian f/4 Telescope used Stary Night Pro 6 (star chart) Autostar Suite (telescope control & DSI II Imager) Nebulosity 2 (Capturing Program) Sculptur Galaxy (NGC 253)(Caldwell 65) (Magnitude 8.0)(Constellation Sculpter)(Type SAB)(Distance 11MLY)(Shot 150/10 sec. Images)(Processed with Nebulosity and Adobe Photoshop). Image taken by Glen Bye

Welcome to 2011!

February 2011

Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2  New Moon	3	4	5
6	7	8	9	10	11  First Quarter	12
13	14	15	16	17	18  FULL MOON Regular Meeting 7:30 PM	19
20	21	22	23	24  Last Quarter	25	26
27	28					

March 2011

Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	3	4  New Moon	5
6	7	8	9	10	11	12  First Quarter
13	14	15	16	17	18 Regular Meeting 7:30 PM	19  FULL MOON
20	21	22	23	24	25	26  Last Quarter
27	28	29	30	31		

Regular Meeting	Fri., February 18	7:30pm
Regular Meeting	Fri., March 18	7:30pm

Family Astronomy Night at West Terrace School.

The EAS has been asked to share our telescopes with the kids at West Terrace Elementary school, on the Westside of Evansville. The school is located near USI just off of Hwy 62. I will post a map on the EAS Yahoo group and have them available at the February meeting. The date is Wednesday April 13th. We are doing the ending portion of the program. We will be providing telescopes for all the students and parents from 7:30pmuntil 8:30pm. We want to be setup by 7pm if possible. I will be attending, and could use another 2 members with telescopes for this event. We did this a couple years ago, and had a good attendance. We could have up to 250+ People this year. If you can help, email or call me to let me know.
Scott Conner 449-2721 or ssconner24@gmail.com

Girl Scout Space Nights @ Evansville Museum

The EAS needs volunteers to help out with 2 Girl Scout events at the Evansville Museum during April. The 1st night is April 2nd and the second night is April 30th. We will need to provide telescopes after dusk for the girls to look through. This event works well if we have 2-3 telescopes available. I will be available for the 30th for sure, I am doing a multimedia presentation before we observe. My schedule is unclear for April 2nd. If you are available to provide telescopes for these events, please RSVP with me so we can get our volunteer list setup before the event. We will setup on the back lawn of the Museum around dusk.

The Newsletter will be Bi-monthly.

I have decide that due to a lack of time for me to do my duties as president, newsletter editor, and Program Presenter as well as spending more time with family, that I need to shed some of those duties. Most of you are aware that Early last year I went through a Divorce, and got news that my father is terminally Ill. Since that time. My father condition has deteriorated, and I have met, dated, and become engaged to Tracey Allen. I also have added more children and even a grand child to my family. I am determined to spend more time with my family. I do not intend to quit the EAS, but I must decrease the amount of time spent at the club. Last year I did around 20 events not including meetings. I did not do those events by myself, I had many good volunteers help me with these events. This adds up to an average on 1 event every other weekend, and that is not going to be possible to do every year. I really don't want to turn down events, because these events have helped our club to operate in the black, since we bring in donations from these events. What I intend to do for now, is

to decrease the frequency of the newsletter from monthly to bi-monthly. The newsletter is the one job I have absolutely no interest in doing, but I realize that it is necessary. I really wished I could find someone in the club who actually likes to do this type of thing. It takes me an average of 4-6 hours a month to get it done, printed, folded, stapled, and mailed. This usually takes away part of another weekend each month which means I average doing something 3 out of 4 weekends every month. The second thing I am looking for is a volunteer or two or three that would like to do the presentation at public events. It really isn't that hard to do, the presentation is already made as a PowerPoint, and is kept up to date by me. It is as simple as reading from the screen and pushing buttons. I really enjoy doing this, even though when I 1st started doing it I was terrified of speaking in public. If I could get 1 or 2 others who could volunteer to do 1 program every 3 months (3-4 per year) it would allow us to maintain the educational output we are doing now, and possibly increase it. The EAS is becoming more and more popular, and that is a good thing. So if you are interested in doing presentations , come up with me, learn the program, and then you can do one. I am willing to share any skills I have with you.
Mitch Luman has agreed to take over the position of Program Chairman from me for 1 year. I would like to thank him very much for getting one more job off my plate.

Girl Scouts Tour

On Saturday January 29th, The EAS held a program for about 22 girl scouts and an equal amount of parents and siblings. The guests arrived just before dark, but the clouds were already rolling in. I setup and did our astronomy 101 multimedia presentation. After the presentations we split the crowd into 2 groups. The groups rotated between the dome, and the hands on activities down stairs. About half the people managed to see Jupiter through gaps in the clouds, but after about 30 minutes, it disappeared completely. Despite the poor viewing, the whole crowd had a good time, and many vowed to come to one of our upcoming PSW's. The troops donated $50 to the EAS.

March Program

"Exploring Ursa Major"

By

Ken Harris

Astronomers Stumble onto Huge Space Molecules

By Trudy E. Bell and Tony Phillips

Deep in interstellar space, in a the swirling gaseous envelope of a planetary nebula, hosts of carbon atoms have joined together to form large three-dimensional molecules of a special type previously seen only on Earth. Astronomers discovered them almost accidentally using NASA's Spitzer Space Telescope.

"They are the largest molecules known in space," declared Jan Cami of the University of Western Ontario, lead author of a paper with three colleagues published in *Science* online on July 22, 2010, and in print on September 3. Not only are the molecules big: they are of a special class of carbon molecules known as "fullerenes" because their structure resembles the geodesic domes popularized by architect Buckminster Fuller. Spitzer found evidence of two types of fullerenes. The smaller type, nicknamed the "buckyball," is chemical formula C_{60}, made of 60 carbon atoms joined in a series of hexagons and pentagons to form a spherical closed cage exactly like a black-and-white soccer ball. Spitzer also found a larger fullerene, chemical formula C_{70}, consisting of 70 carbon atoms in an elongated closed cage more resembling an oval rugby ball.

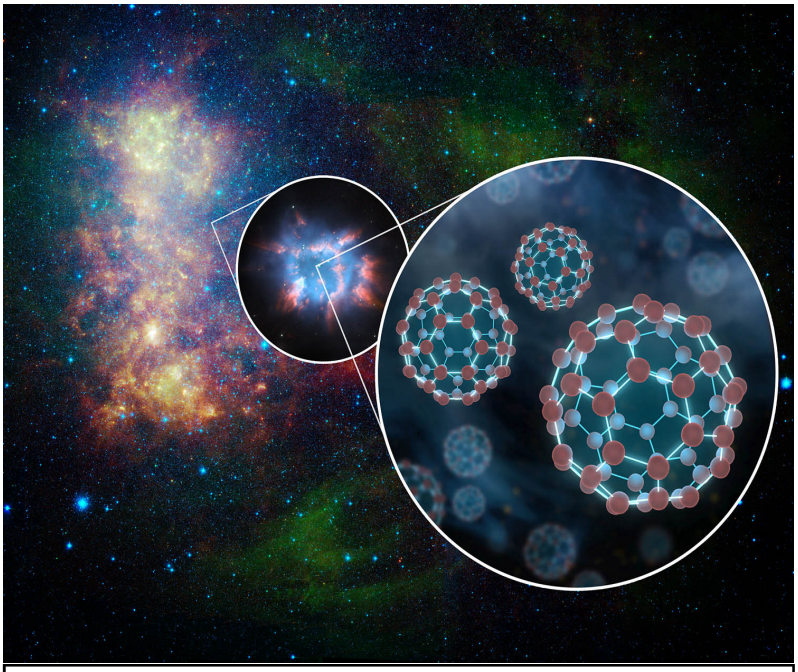
Neither type of fullerene is rigid; instead, their carbon atoms vibrate in and out, rather like the surface of a large soap bubble changes shape as it floats through the air. "Those vibrations correspond to wavelengths of infrared light emitted or absorbed—and that infrared emission is what Spitzer recorded," Cami explained.

Although fullerenes have been sought in space for the last 25 years, ever since they were first identified in the laboratory, the astronomers practically stumbled into the discovery. Co-author Jeronimo Bernard-Salas of Cornell University, an expert in gas and dust in planetary nebulae, was doing routine research with Spitzer's infrared observations of planetary nebulae with its spectroscopy instrument. When he studied the spectrum (infrared signature) of a dim planetary nebula called Tc 1 in the southern-hemisphere constellation of Ara, he noticed several clear peaks he had not seen before in the spectra of other planetary nebulae.

"When he came to me," recounted Cami, an astrophysicist who specializes in molecular chemistry, "I immediately and intuitively knew it I was looking at buckyballs in space. I've never been that excited!" The authors confirmed his hunch by carefully comparing the Tc 1 spectrum to laboratory experiments described in the literature.

"This discovery shows that it is possible—even easy—for complex carbonaceous molecules to form spontaneously in space," Cami said. "Now that we

know fullerenes are out there, we can figure out their roles in the physics and chemistry of deep space. Who knows what other complex chemical compounds exist—maybe even some relevant to the formation of life in the universe!"
Stay tuned!
Learn more about this discovery at http://www.spitzer.caltech.edu. For kids, there are lots of beautiful Spitzer images to match up in the Spitzer Concentration game at http://spaceplace.nasa.gov/en/kids/spitzer/concentration.
This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



Superimposed on a Spitzer infrared photo of the Small Magellanic Cloud is an artist's illustration depicting a magnified view of a planetary nebula and an even further magnified view of buckyballs, which consist of 60 carbon atoms arranged like soccer balls.

EAS MEETING
November 19, 2010

The meeting was CALLED TO ORDER by President Scott Conner at 7:36 PM with 37 members and visitors in attendance.

It was moved and seconded to approve the MINUTES as printed in the newsletter.

Vice President Tony Bryan announced these UPCOMING EVENTS:

Regular Meeting Fri., Dec. 17 7:30 PM
(Ken Harris is Quiz Master)

VISITORS included: Brooke Hask, Melodie Hash, Makayla Goen, Kaila Rushton, Jordon Napier, Connor Thomas, Kaleb McArdle, Art Collins, Jim Benert, Karen Bengert, Charlene Bengert and Christine Thompson & Bernie

Treasurer Scott Bishop stated that the proceeds from our GMAC bond has been invested in PIMCO bond. The desk calendars have been ordered but not received yet. The wall calendars are still available at a $7.00 each. SAVINGS = $4,722 and CHECKING = $4,703.

SPECIAL PROJECTS

The president mentioned improvements that are needed to be done some time in the future, and they include replacing the conduits, carpet & pouring sidewalk and pads for telescopes.

OLD BUSINESS

The FALL/WINTER CLEANUP was held & a handful of volunteers helped-out with cleaning of the facility & maintenance on the ceiling in the lecture hall, etc. Many thanks to our volunteers who helped.

The JUPITER WATCH was very successful with about 75 in attendance.

The WESSELMAN WOODS observation did not take place.

FAMILY ASTRONOMY NIGHT @ STS. PETER & PAUL SCHOOL in Haubstadt was cancelled due to a scheduling conflict at the school.

Astronomy Night @ McGARY MIDDLE SCHOOL went well.

The PSW on Saturday, November 13 had a good turnout for about 50 people in attendance with viewing between the clouds. It resulted in $50 donations.

Donna Emmons and Ken Harris also helped with observation events in their areas.

NEW BUSINESS

Election of officers took place renewing the current slate as follows:

President - Scott Conner
Vice President - Tony Bryan
Treasurer - Scott Bishop
Secretary - Charleen Kaelin
Counselor - Kent Brenton
Program Chairman - ???
Newsletter Editor - ???

The Program Chairman and Newsletter Editor positions remain vacant.
Anyone wishing to volunteer for those positions, please let Scott know.

Scott reminded the attendees that our annual Christmas Party/Astronomy Quiz will be held Friday, December 17. Everyone is invited to attend and bring a small dish for the party.

Charleen Kaelin announced an event presented by the Evansville Philharmonic entitled “The Planets” that will take place May 1 at 2:00 PM. Tickets range from $15.00 - $35.00. If interested in attending, contact the Evansville Philharmonic during normal business hours.

The meeting was adjourned at 8:01 PM.

The PROGRAM was presented by Joe Caruso entitled “Cosmological Distance Scale”.

Respectfully submitted,

Charleen Kaelin
Executive Board Secretary

Observing the Skies of South America

by Mitch Luman

Last December I fulfilled a long-time promise I made to myself to travel to South America to view the southern skies. Accompanying me to Santiago, Chile was my long-time friend Dr. Carl Wenning, a semiretired physics professor at Illinois State University. My trip to Chile will be the subject of the February 18 program, which will describe my trip 34 degrees south of the equator.

Chile is world-famous for its pristine, mountain observing sites. Most of the famous Chilean observatories are located high above the Atacama Desert, hundreds of miles north. While in Santiago, we spent an evening observing with students from the Universidad Metropolitana de Cienceias de la Educatión at their observatory located in the city of Santiago. As you may recall, Chile experienced a gargantuan magnitude 8.8 earthquake on February 27, 2010. The temblor, which measured 6th magnitude in Santiago did a number on the observatory. In addition to knocking the observatory dome off its tracks, it also warped its telescope mount.

Chile is a nation of 17 million people, 6 million of which live in the capital of Santiago. As you might expect, a city of that size creates a lot of light pollution, so we spent some time away from the city where the skies revealed more of the wonders of the southern sky.

In my program I will recount my travels with our hosts, Selma and Claudio Perez Matzen, to El Ingenio, a small town along the Rio de Maipo located about 30 miles southeast of Santiago. There, after a traditional Chilean dinner that lasted until well after midnight, we did some heavy binocular observing. I plied the skies happily until a half hour before dawn.

The next day, we attended a signing ceremony at a new tourist observatory, located in the hills above the Rio de Maipo near El Ingenio. A contract was signed between this new observatory and the University in Santiago that called for physics education majors to provide "informal education" to visitors. At the observatory, tourists will be able to dine on-site and after dinner step outside for casual viewing using several telescopes. What a concept, food and observing, two of my favorite things! We were among the first to use the observatories new, 14 inch SCT. The southern constellations that are all circumpolar here!

During the trip, I bagged 45 of the required 50 objects on the Astronomical League's Southern Sky Binocular list.

More details on the trip, including my impressions of the outdoor lighting there, my thoughts on life in Chile and the potential for astronomical tourism under those amazing southern skies will be the subject of my program.

2011 EAS OFFICERS

Scott Conner
President

An Evansville West-sider and a Mater Dei High School graduate, Scott continued his education at USI and IVY Tech. He is currently employed in the Metal Fabrication Industry as a Manager. Scott actually has a zest for the "trilogy of sister sciences": Astronomy, Geology and Meteorology. A very valuable asset to the EAS, Scott has served in previous years as the Society's Secretary, Vice President and Treasurer.

(C) 449-2721
ssconner24@gmail.com

Tony Bryan
Vice President

Tony calls Louisville, Ky. His home town but now resides in Jasper, In. with wife Donna. Tony is a senior technician employed by the U.S. Government. Interest in Astronomy began very early but reached a peak when Tony became an active member of the Louisville club. He has an excellent 8" Meade scope but shows no bias when viewing the skies, "He likes them all."
Other interests include woodworking and collecting classic cars. For relaxation, he enjoys hiking.

Charleen Kaelin
Secretary

A current resident of Evansville, IN, Charleen was born in Baton Rouge, LA where she received her Bachelor of Science degree in Business.

She moved to this area in 1993. She works for a judge and lawyer in the Tribunal Office of the Diocese of Evansville.

Charleen's hobbies include community service, decorating for all holidays and events, and sharing information on astronomy.

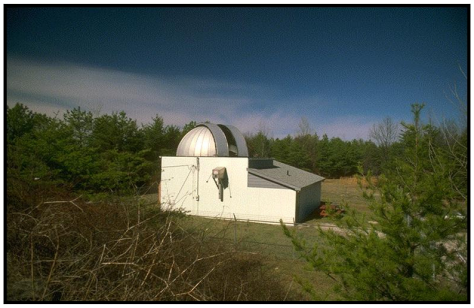
(H) (812) 303-1711

Scott Bishop
Treasurer

A Native of Evansville, Scott lives on the city's west side with wife Crystal and Daughters Flannery and Piper. Professionally, Scott is a graphic artist. Although his interest in astronomy developed only recently, he has made remarkable progress. He now owns a 6" Dobsonian scope but shows no preference as to which sky objects he views. "The sky's the limit." Other hobbies Scott enjoys include bowling, reading and short story writing.

The Evansville Astronomical Society 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, both for its members and the public, to extensively study the skies, and (2) promote an educational program for those who wish to learn more about the science of Astronomy

The E.A.S. facility is located in Wahnsiedler Observatory at Lynnville Park near the town of Lynnville, Indiana. Lynnville is about 20 miles NE of Evansville. This location serves as the organization's headquarters. The observatory contains a lecture hall, computer room, photographic dark room, lounge and a dome housing 2 telescopes: a 14" reflector and a 12.5" reflector. There is also a portable solar scope.



Meetings are held the third Friday of each month, except June, when the annual E.A.S. picnic is held. The Society also sponsors Open House events monthly through the warmer seasons) that afford the public an opportunity to tour the observatory.

The Dues schedule for membership in the E.A.S. is:

Family…$40.00 Single…$35.00

The accounting year covered by the dues runs from July 1 to June 30 of the next year. Anyone joining the E.A.S. from January to June. Dues are 1/2 of the amount listed in the box, then full dues beginning in July. Optional, but recommended, is the subscription to Sky and Telescope and/or Astronomy Magazines. Special subscription rate are available through the club.

EAS Website
http://evansvilleastro.org

The E.A.S. newsletter, OBSERVER, is published monthly. Anyone wishing to contribute articles, should mail them to the Clubs PO Box. EAS, at PO Box 3474, Evansville, IN 47733, or email them to the editor at ssconner24@gmail.com