



MICHIANA ASTRONOMICAL SOCIETY

The Sirius Observer

December 2008

South Bend, Mishawaka, Elkhart, Niles

President's Corner

The International Year of Astronomy will begin soon, and we look forward to special events to help us commemorate the 400th year of the telescope! Not all plans are completed, but here's a sampling of what's in store for the next two months:

January 19 MAS meeting

First, Mark will introduce us to the wonders of Auriga, then Dayle Brown will share sky-lore gleaned from around the world. Her extensive research and talent have produced three incredible, authentic, beautifully illustrated books – you will want to see and hear this!

February 7 Science Alive at the South Bend Library, 9:00 – 4:00

Plans are in the works – see Linda or Ruth to get involved!

February 16 MAS meeting

Linda will tell us about Canis Major and Minor.

February 26-27 Pinwheel Galaxy program at Kennedy Planetarium, 5:30, 6:30, and 7:30 both evenings

An incredible Hubble-Spitzer-Chandra composite image of the Pinwheel Galaxy (M101) provided for IYA by NASA's Space Telescope Science Institute will be on permanent display. A planetarium presentation will provide explanation and invite viewing.

Meanwhile -- 'Tis the Season! May yours be the best ever Solstice-Hanukkah-Christmas-New Year!

Ruth Craft

Event Calendar

December 2008

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5 ☾	6
7	8	9	10	11	12 ●	13
14	15	16	17	18	19 ☽	20
21	22	23	24	25	26	27 ○
28	29	30	31			

Dec 5: First Quarter Moon
 Dec 12: Full Moon
 Dec 15: **MAS Meeting, 7:00 PM**
 Dec 19: Last Quarter Moon
 Dec 27: New Moon
 Dec 27: New Moon observing, Potawatomi

January 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4 ☾	5	6	7	8	9	10 ●
11	12	13	14	15	16	17 ☽
18	19	20	21	22	23	24
25 ○	26	27	28	29	30	31

Jan 4: First Quarter Moon
 Jan 10: Full Moon
 Jan 19: **MAS Meeting, 7:00 PM**
 Jan 17: Last Quarter Moon
 Jan 24: New Moon observing, Potawatomi
 Jan 25: New Moon

MAS meeting minutes, November 17, 2008

President Ruth Craft opened the meeting with introductions by each member. Each related news pertaining to the organization, or astronomy in general:

Steve Accuosti reported the presence of more than 15 telescopes in his domicile: 13 small refractors donated by Art Klinger, all assembled now; a club-owned 10" Schmitt-Cassegrain that needs TLC and cleaning, and a recently donated 12.5" reflector from Mila Pierce. The Pierce scope weighs in at around 700 lbs. The primary mirror needs to be coated, and a motion should be made at the next meeting to get it done.

Patricia Miller will be making a new set of labels for the upcoming (May '09) Michiana Star Party.

Linda Marks stated the need for the non-profit paperwork to be finished so that donations can also benefit the donor. (Dan Smith tells us this is a work in progress.) The club still has 6 MSP1 t-shirts available for sale at a discounted rate.

Tom Nowicki will likely be our new media liason.

Eileen Murphy and Lucy Cannata were in attendance.

Chuck Bueter recounted the "Let There Be Night" program that he and Art Klinger hosted at the PHM Planetarium, which was well-attended. DVD's will be issued to public schools as a result of the program. Thousands of local children will participate in the "Globe at Night" program in the spring. Chuck made 26 school visits to train many teachers about light pollution and the Globe program in workshops.

Mike Leschevsky is helping Chuck with data

plotting (planning stages now) to quantify the results to be recorded by the Globe at Night participants. We will soon know for sure how much of the night sky we have lost due to light pollution.

Phil Hyatt and Jerry Karacsony were in attendance.

Dan Smith told us that our meeting place has been issued a new check to cover damages (in the unlikely event that we make any...). Dan looked for record of the Schmitt-Cass purchase, and found that in March of 2004, \$450 was paid for its purchase.

Mike Sherck suggests that members join Cloudynights.com to keep track of sky events. He is interested in the International Year of Astronomy (IYA) and astrophotography.

Visitors included Matt Dowd of the Notre Dame Press. He assisted our presenter with his program, and brought along his twin sons, who attend LaSalle Academy. He attended the Notre Dame graduate school in the program of Philosophy and History of Science.

President Ruth Craft has met her goal of seeing every third grader at Kennedy Academy. Every student has now had the experience of seeing the moon through a telescope. She thanked Linda and Steve for the bonfire and stargazing night at their home during the recent good weather.

Kennedy Planetarium will be a recipient of a big print of the Pinwheel Galaxy from the SCSI and NASA to commemorate IYA. This picture is a composite photo of the HST, Spitzer ST and the Chandra X-ray Observatory. Ruth says she will invite club members to the dedication which will be held on February 27, 2009 at the school.

Ruth introduced Dr. Michael Crowe (retired) of

Notre Dame University. His lecture was entitled "The Extraterrestrial Life Debate: Antiquity to 1915". Dr. Crowe recently published his second book on this topic, and was to have a book signing at the ND bookstore on the following Saturday. He has put 15-20 years worth of research into this book. His previous book, "Plurality of Worlds", was published in 1986 by Cambridge University Press.

Dr. Crowe detailed the highlights of his book, including "atomists" from the third century B.C., all major astronomers from Copernicus to Maunder, through today's major breakthroughs of understanding extremophiles and the discovery of exoplanets. The word "extraterrestrial", he found, was first coined in 1833 when Whewell used it to describe a meteorite, which is certainly of extraterrestrial (outside-earth) origins!

Respectfully submitted,

Linda Marks (Vice-President, sitting in as November's secretary)



Superstar Hide and Seek

by Dr. Tony Phillips

It sounds like an impossible task: Take a star a hundred times larger in diameter and millions of times more luminous than the Sun and hide it in our own galaxy where the most powerful optical telescopes on Earth cannot find it.

But it is not impossible. In fact, there could be dozens to hundreds of such stars hiding in the Milky Way right now. Furiously burning their inner stores of hydrogen, these hidden superstars are like ticking bombs poised to 'go supernova' at any moment, possibly unleashing powerful gamma-ray bursts. No wonder astronomers are hunting for them.

Earlier this year, they found one.

"It's called the Peony nebula star," says Lidia Oskinova of Potsdam University in Germany. "It shines like 3.2 million suns and weighs in at about 90 solar masses."

The star lies behind a dense veil of dust near the center of the Milky Way galaxy. Starlight traveling through the dust is attenuated so much that the Peony star, at first glance, looks rather dim and ordinary. Oskinova's team set the record straight using NASA's Spitzer Space Telescope. Clouds of dust can hide a star from visible-light telescopes, but Spitzer is an infrared telescope able to penetrate the dusty gloom.

"Using data from Spitzer, along with infrared observations from the ESO's New Technology Telescope in Chile, we calculated the Peony star's true luminosity," she explains. "In the Milky Way galaxy, it is second only to another known superstar, Eta Carina, which shines like 4.7 million suns."

Oskinova believes this is just the tip of the iceberg. Theoretical models of star formation suggest that one Peony-type star is born in our galaxy every 10,000 years. Given that the lifetime of such a star is about one million years, there should be 100 of them in the Milky Way at any given moment.

Could that be a hundred deadly gamma-ray bursts waiting to happen? Oskinova is not worried.

"There's no threat to Earth," she believes.

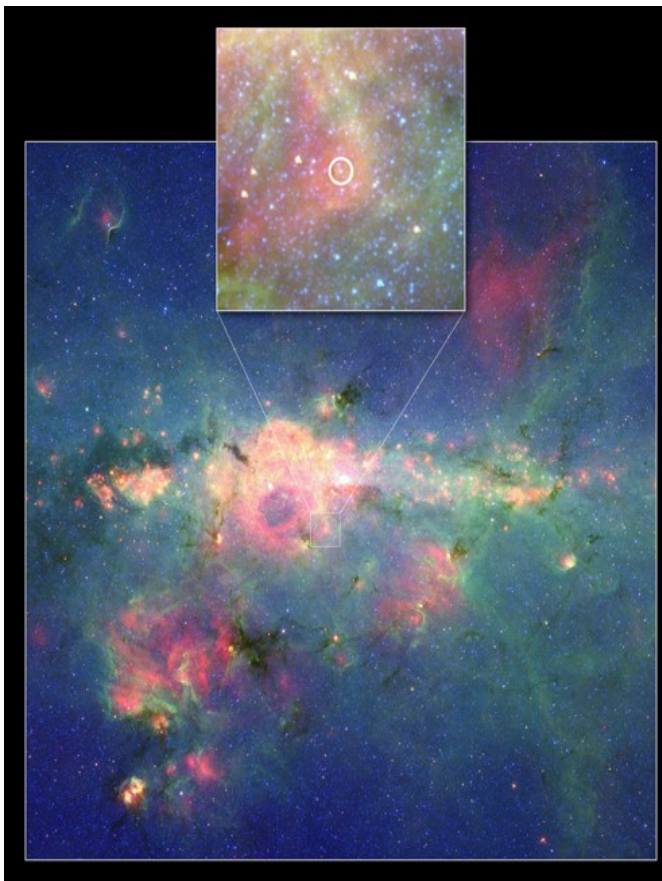
"Gamma-ray bursts produce tightly focused jets of radiation and we would be extremely unlucky to be in the way of one. Furthermore, there don't appear to be any supermassive stars within a thousand light years of our planet."

Nevertheless, the hunt continues. Mapping and studying supermassive stars will help researchers understand the inner workings of extreme star formation and, moreover, identify stars on the brink of supernova. One day, astronomers monitoring a Peony-type star could witness with their own eyes one of the biggest explosions since the Big Bang itself.

Now *that* might be hard to hide.

Find out the latest news on discoveries using the Spitzer at www.spitzer.caltech.edu. Kids (of all ages) can read about "Lucy's Planet Hunt" using the Spitzer Space Telescope at spaceplace.nasa.gov/en/kids/spitzer/lucy.

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



The "Peony Nebula" star is the second-brightest found in the Milky Way Galaxy, after Eta Carina. The Peony star blazes with the light of 3.2 million suns.



Galaxy Zoo II

Last year a unique science project, Galaxy Zoo, tested whether ordinary folks like you and me could determine the broad classification of galaxies based on viewing images of them over the Internet. Participants were asked to look at photographs of distant galaxies taken from the Sloan Digital Sky Survey and decide whether the faint smudges were spiral, elliptical, or irregular. After recording millions of classifications submitted to their web site, <http://www.galaxyzoo.org/>, researchers determined that the results were comparable to the results produced by professional astronomers. Good job, everyone who participated!

A follow-up project, Galaxy Zoo II has been announced. The announcement e-mail states,

"We're now ready to move on to the next phase of the project; having shown that Galaxy Zoo's classifiers can match the professionals in sorting out galaxies, we're ready to give you a new challenge. Getting more detailed classifications will greatly increase the science we can do, so we've taken the 250,000 (roughly) brightest galaxies from the Galaxy Zoo sample and need your help to sort through them. Instead of just asking whether they are spiral or elliptical, Galaxy Zoo 2 allows you to spend more time with each galaxy. What's more, the sample contains fewer orange blobs so the chances of seeing something spectacular have never been greater."

No special skills are required; all you need to participate is a computer and access to the Internet. If you ever wanted to participate in real science, go to www.galaxyzoo.org and sign up today!

Michiana Astronomical Society
PO Box 262
South Bend, IN 46624



Like what you see? Come and join the fun – It's out of this world!

Michiana Astronomical Society Membership Application

Please fill out and mail, along with check or money order, to:

Michiana Astronomical Society
PO Box 262
South Bend, IN 46624

Name: _____
Address: _____
City: _____ State: _____ Zp Code: _____
Telephone: _____ E-mail: _____

Type of membership: Individual (\$15) Student or Senior (\$12) Family (\$20)