The Newsletter of the Milwaukee Astronomical Society **Jan & Feb 2004**

Presidents Message

by Scott Jamieson

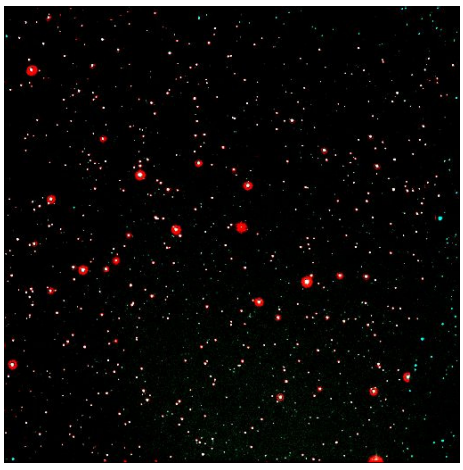
For those of you that did not attend the November meeting, when I explained the picture shown below, a brief explanation will follow.

I have been experimenting using my ST9 camera on a short focal length telescope to give me a wider field for larger objects. Despite being fully aware that achromatic aberration would be severe in the infrared wavelengths, I tried it anyway and found that indeed the images were quite fuzzy. However, I also noticed two images that appeared to be planetary nebulae. It turns out that the deep infrared was way out of focus forming a large round image similar to other stars, but in this case I could only see a very faint stellar object in the middle. This object was obviously radiating mainly in the infrared and a check of the Deep Sky Survey, available on the internet, revealed that this was IRC 44460, a compact M9 class infrared star. This was a real surprise to me and led me to take and examine 4 more fields using the same setup. I found a total of 3 more similar objects that turned out to be Mira type variable stars that also radiate primarily in the infrared. I enjoyed the fact that with such as simple setup I could "discover" such unusual stars. I have resolved to do my own version of a sky survey to look for other infrared objects just for the fun of it. By the way the original images were taken with my 7x50 finder as the telescope!

The image reproduction below is a bit too small to really see this object clearly, but it's the red star in the center. The color picture was produced by combining a V-filter image for the Green and Blue and using the unfiltered image for the Red.

This experiment has brought home two points for me. First, when using a refractor for imaging, the stars will be blurred by the infrared unless you use a V-filter. Second, when taking magnitude measurements from images, be careful what comparison stars you use as they may have a greatly different spectrum than the AAVSO data, which is all V-filtered.

As most of you already know, I will be retiring from the office of President this May. Just so there is no confusion, I still have great faith in the MAS and intend to stay active, particularly in the hunt for a new site. I do feel, however, that six years is a long time to try and lead an organization and that it is time for others to take over. I have enjoyed this time greatly and appreciate the faith many of you have shown in me.

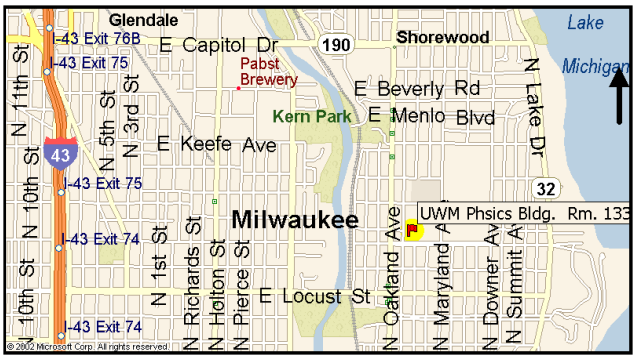


Don't forget that elections are coming up at the May meeting and, as usual, all offices are open. If you have a real interest in contributing to our club, the best way is to get involved.

MAS General Meetings

The January thru April meetings of the Milwaukee Astronomical Society will be held at the UWM Kenwood Campus in the Physics Bldg., Room 133.

The Board meets at 7 PM (All board members are requested to attend) and the general Membership meets at 8 PM. Visitors are welcome. See the map below for directions:



December Board Meeting:

by Henry Gerner

The board approved the purchase of Adobe Acrobat 6 Pro, and Microsoft Office Publisher 2003 to be used by Jerry Bialozynski for the production of the Focal Point.

Lunar Eclipse Party

by Henry Gerner

On November 8th Astronomy Magazine hosted a "Total Lunar Eclipse Party" on the shores of Lake Michigan (Veterans Park) in Milwaukee. WISN Channel 12, the local ABC affiliate also co-sponsored the event. Matthew E Quandt, Assistant Editor of Astronomy Magazine invited the Milwaukee Astronomical Society to participate. Great participation was shown by our membership. Scott Jamieson was there with his 10" LX200, Steve Diesso, Scott Berg, Tim Burrus, Thisath Kularatna, Carlos Garces, Paul Gruener to name just a few. I apologize if I missed some of the other members but we were kept very busy with questions from the public. There were hundreds of people that came out to view the eclipse making it a huge success for Astronomy Magazine, which also had door prizes including a telescope donated by Meade. Matter of fact I hear Scott Jamieson was kept so busy he never had a chance to pause for a warm beverage also provided by Astronomy Magazine.
There was some talk by Astronomy Magazine to do it again this spring when the comets arrive.

In a related note, below is a picture taken by Carlos Garces of the eclipse. Carlos placed his 3 Mega pixel Canon Digital camera up to the eyepiece of an 8" Dobsonian and snapped this shot:

The following picture submitted by Gerry Samolyk. Taken with a 6" f/5 scope on 200 ASA film.

3 Annual Christmas Party

by Jerry Bialozynski

The on site MAS Christmas Party appeared once again to be a success and enjoyed by everyone in attendance. Much laughter and camaraderie was heard throughout the evening. About 15 pizzas, of different combinations of ingredients, were enjoyed with a plentiful supply of beer and soda.

Member Guides - Update

by Scott Berg

Last month I asked the membership for their input of information to produce a Member's Guide. I have received some documentation and several very generous offers. Thank you!

After some discussion with the people responding to my request, it became clear that there should be at least two documents. This project is still getting organized, so please keep those ideas coming.

1) **New Member Orientation Guide** - About 10 to 20 printed pages given every new member.

- History
- Location
- Rules for parking, access, site security
- MAS organizational structure, constitution and bylaws
- Library policy
- Detailed instructions for the use of beginner scopes (Weisen,Albrecht)
- Brief overview of the more advanced scopes
- List of information sources on astronomy e.g. magazines, web sites, textbooks, amateur organizations

2) **Comprehensive MAS User Guide** - Combination of written and electronic form. Probably sold at a nominal fee to those who want it.

- Detailed operating instruction for all scopes (LX200, Z, Z2, etc.)
- Articles, monographs, etc. written by members on a topic of interest e.g. variable star observ ing, planetary observing, solar observing
- Database of images taken by MAS members. These would be in electronic form and suitable for MAS member presentations, open houses, etc.
- Collection of useful spreadsheets and other software (freeware) for astronomical data

If you have anything you would like to contribute, please contact: Scott Berg, 18115 Whippletree Lane, Brookfield, Wisconsin 53045
(262) 797-8772 or scott@scottberg.com

Upcoming Messier Marathon

by Henry Gerner

This years marathon will take place on March 20th (Rain Date March 27th). Whether you stop by for an hour or spend the whole night, it's a good way to get acquainted in using the MAS telescopes or bring your own out. In the past pizza runs were made to keep everyone charged up. See you there!

4 The Year Ahead

submitted by Henry Gerner

The schedule of events was drawn up and approved at the last meeting of the board. Plan your calendars:

Jan. 16 Board Meeting, General Meeting at UWM
Feb. 20 Board Meeting, General Meeting at UWM
Mar. 19 Board Meeting, General Meeting at UWM
Mar. 20 Messier Marathon at the Observatory
Mar. 26 Open House at the Observatory- topic: Saturn.
Mar. 27 Messier Marathon (rain or cloud alternate date)
Apr. 16 Board Meeting, General Meeting at UWM
Apr. 23 Open House at the Observatory, topic: Jupiter.
May 14 Open House at the Observatory, topic: Telling time by Milwaukee stars and the Allen Bradley clock.
May 21 Board Meeting, Election of Officers, General Meeting at the Observatory
June ? (Tentative Open House) Topic: Solar Eclipses and Solar Observing w/ scopes set up for solar viewing
June 14 Board Meeting at the Observatory
July 17 M.A.S. picnic at the Observatory
July 12 Board Meeting at the Observatory
Aug. 9 Board Meeting at the Observatory
Aug. 13 Open House at the Observatory, topic: The Moon and Occultations
Sept. 10 Open House at the Observatory, topic: TBA
Sept. 17 thru 19 M.A.S. Campout - location TBA
Sept. 24 Board Meeting at the Observatory
Oct. 8 Open House at the Observatory, topic: On a dark night you can see forever: The Local Group of Galaxies.
Oct. 15 Board Meeting, General Meeting at the Observatory
Nov. 19 Board Meeting, General Meeting at the Observatory
Dec. 4 Christmas Party at the Observatory.

Presentation topics, for the General Meetings, will be posted on the M.A.S. website.
Special Events, other then dates listed above, will be posted on the M.A.S. website.
Project in Process: e-mail notification to members with internet access for Special Events, an alternative method is being discussed on alerting members without internet access.

NASA's Space Place

So Little Time, So Many Galaxies

By Dr. Tony Phillips

Fourteen billion years ago, just after the Big Bang, the universe was an expanding fireball, white hot and nearly uniform. All of space was filled with elementary particles and radiation. "Soupy" is how some cosmologists describe it.

Today the universe is completely different. It's still expanding-even accelerating-but there the resemblance ends. The universe we live in now is "lumpy." Great cold voids are sprinkled with glowing galaxies. In galaxies, there are stars. Around stars, there are planets. On one planet, at least, there is life.

How we got from there to here is a mystery.

Finding out is the goal the Galaxy Evolution Explorer, "GALEX" for short, a small NASA spacecraft launched into Earth orbit April 28, 2003. GALEX carries an ultraviolet (UV) telescope for studying galaxies as far away as 10 billion light-years.

"GALEX is a time machine," says astronomer Peter Friedman of Caltech. Because light takes time to travel from place to place, pictures of distant galaxies reveal them as they were in the past. "GALEX is investigating the evolution of galaxies over 80% of the history of our universe."

The Hubble Space Telescope can see faraway galaxies, too, but GALEX has an advantage: While Hubble looks in great detail at very small regions of the sky, GALEX is surveying the entire sky, cataloging millions of galaxies during its 2-year mission.

GALEX is a UV mission for a reason. Friedman explains: "UV radiation is a telltale sign of star birth." Stars are born when knots of gas condense in interstellar clouds. The ones we see best are the big ones-massive stars that burn hot and emit lots of UV radiation. "These stars are short-lived, so they trace recent star formation."

Understanding star formation is crucial to studies of galaxy evolution. When galaxies collide, star formation surges. When galaxies run out of interstellar gas, star formation wanes. In galaxies like the Milky Way, spiral arms are outlined by star-forming clouds. The shapes of galaxies, their history and fate ä they're all connected by star formation.

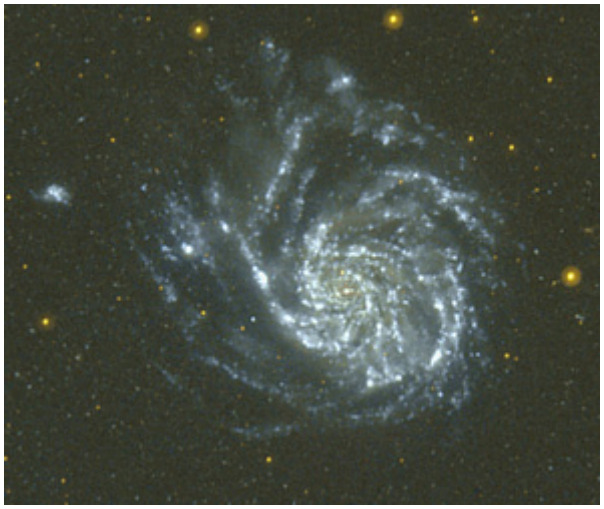
Even life hinges on star formation, because stars make heavy elements for planets and organic molecules.

"Our measurements of UV radiation will tell us both the rate at which stars are forming in galaxies and the distances of the galaxies," says Friedman.

How did we get here? GALEX will show the way.

Find out more about GALEX at: www.galex.caltech.edu. For children, visit The Space Place at spaceplace.nasa.gov/galex_make1.htm and make a beautiful galactic mobile while learning about some of the different shapes galaxies can take.

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



This image of Messier 101 (M101), a.k.a. the "Pinwheel Galaxy," was taken in two orbits of GALEX on June 20, 2003. M101 is 20 million light years away.

New Members

by Carlos Garces

This month 2 families joined the MAS. They are:

Dr. Kari Kopach & Family of Pewaukee
Stephanie Seymour & Family of New Berlin

A warm welcome to both!!

Focal Point Editor's Note

At this time, the MAS Officers & Board Members would like to extend their wishes for a Merry Christmas and a Happy New Year to the MAS membership.

I would also like to receive constructive input on your opinions of this newsletter. This is my first endeavor into something of this nature and I'll need all the help I can get to improve it over time!

Send comments to: focalpoint@bialozynski.com

MAS Officers / Staff

President:	Scott Jamieson	(262) 896-0119
Vice President:	Vern Hoag	(262) 548-9130
Treasurer:	Chris Weber	(262) 789-7128
Secretary:	Henry Gerner	(414) 774-9194
Observatory Director:	Gerry Samolyk	(414) 529-9051
Assistant Observatory Director:	Paul Borchardt	(262) 781-0169
Focal Point:	Jerry Bialozynski	(262) 895-7461

Future MAS Events

Messier Marathon Event to take place at the observatory the evening of March 20 (Rain date March 27)

MAS Membership is open to anyone interested in Astronomy who wishes to enrich their knowledge of the Universe.
Yearly Membership Dues:
Individual $34/yr, Family $40, Non-resident (individual $22, Family $40), Student (under 18) $16. For more information, contact Membership Chairman, Carlos Garces, 16430 Melody Drive, New Berlin, WI. 53151.
Phone: (**262) 786-2623** Email : **cgarces@wi.rr.com**

Focal Point Publishing Guidelines
The Focal Point Newsletter is published bi-monthly (Sept., Nov., Jan., March, May and July). Articles, Announcements, Graphics, Photos, Swap/Sale Ads etc. should be **submitted at least 10 days** prior to the first of the month (of the pending issue). Article inputs are preferred via email in a Text or Word compatible format. Submit Focal Point inputs to:
Jerry Bialozynski **focalpoint@bialozynski.com**

Saturday Night Key Holder

January

3	Tim Huff	(262) 662-2212
10	Scott Jamieson	(262) 896-0119
17	Lee Keith	(414) 425-2331
24	Dan Koehler	(262) 662-2987
31	Scott Laskowski	(414) 421-3517

February

7	Bob Manske	(608) 849-5287
14	Gary Parson	(262) 895-3015
21	Terry Ross	(262) 784-2093
28	Gerry Samolyk	(414) 529-9051

March

6	Tom Schmidtkunz	(414) 352-1674
13	Neil Simmons	(262) 889-2039

Loaner Telescopes (available to members for local use)

Lee Keith (Franklin)	(414) 425-2331	8” Dob reflector
Scott Jamieson (Waukesha)	(262) 896-0119	8” Dob reflector
Paul Borchardt (MAS site)	(262) 781-0169	6” Dob reflector
Chris Weber (New Berlin)	(262) 789-7128	8” Dob reflector

MAS Observatory (262) 542-9071

MAS Web Page: www.milwaukeeastro.org

The Milwaukee Astronomical Society
c/o Jerry Bialozynski
8823 Oriole Lane
Wind Lake, WI 53185-5516

ADDRESS CHANGE SERVICE REQUESTED

*The **Next Board & General meeting of the MAS** will be held on **January 16**. The Board will meet at 7:00 PM, the General Meeting will be at 8:00 PM at **UWM**.*