Focal Point

May, 2011

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May 20th: Election Meeting

The next General Membership Meeting is going to be held on May 20th, at 8:00 PM at the MAS Observatory. The main topics of this business meeting are going to be electing two new board members, and voting for the Proposed Membership Dues Increase.

The recommendation is to raise dues by $10 for each membership class. The resolution will be put forth and majority can approve, modify or reject the recommendation.

Membership dues were last increased in 2008 when we also faced a cash flow crisis.

Article IV, Section 4 of the MAS By-laws states that, "Dues may be changed only by majority vote at a membership meeting with at least one (1) month notice."

Right after the Election Meeting the new Board of Directors will elect the President, the Vice President, the Treasurer and the Secretary. At the end of this procedure the President will nominate the Chairs.

Also, we are seeking a MAS member to fill in the Virgil Tangney's unexpired Board member position till 2012. Members interested in filling any open position should contact the current MAS Vice President immediately.

Membership for Astronomical League

I have taken over as the Astronomical League Correspondent in 2011. The AL has been promoting Astronomy for many years through its website at www.astroleague.org/, the Reflector Magazine or the many observing awards the AL gives to members every month. The Astronomical League gives out observing certificates for the following awards: Asteroid Award, Binocular Messier Club Award, Comet Observer Award, Dark Sky Advocate Award, Deep Sky Binocular Award, Flat Galaxy Award, Galaxy Groups and Clusters Award, Herschel 400 Award, Herschel II Award, Globular Cluster Club Award, Lunar Observing Award, Lunar II Club Award, Messier Award, Meteor Award, Outreach Award, Planetary Nebula Club, Southern Skies Telescopic and the Urban Skies Award. There is an observing certificate for many different interests if you are so inclined to observe and document your observations. Many MAS members have received their Messier Awards and I know of one ambitious member who is working on the Herschel 400 Award. If you are interested in joining the Astronomical League through the MAS please contact me at danheleny@aol.com for details. I would need you to send me a check made out to the Astronomical League for $7.50 by June 1, 2011 so I can sign you up. I also need checks sent to me from the current AL members by June 1, 2011.

Please check out the Astronomical League webpage and contact me if you have any questions. If you are interested in an old copy of the Reflector Magazine just let me know.

by Dan Yanko
ALCOR

Treasurer's Report

The MAS received donations from the following individuals: Brian Ganiere and Gerry Samolyk. Thanks to Brian we have been able to provide honorariums for two speakers at our general meetings and a visit to the planetarium at UWM. Thank you for your support of the MAS. We have also been bringing in money from parking donations - $140 so far this year. Please consider donating your time to collect money from the drivers to help this trend continue. We have a checking account balance of $4,121.27 as of May 4th. The Albrecht fund for the dark sky site sits at $7,886.96.

Respectfully Submitted,

Neil Simmons, Treasurer

Special Announcement

We are looking for an investment expert, to help with management of our Endowment Founds. Members with financial expertise, please step up and contribute your knowledge to secure our Society's future prosperity.

Erratum

Previously we announced a wrong area code for the new MAS phone. The right phone number is:

414-477-6220

Membership Meeting Minutes

Held on April 22th at MAS Observatory.

The meeting was called to order at 8:02 PM by Vice President, Brian Ganiere

Minutes of the March 25th General Meeting were read . Funeral date of Edward Halbach was corrected to March 27th. Than minutes were accepted as amended.

The **Treasurer's Report** was given by Treasurer, Neil Simmons. Copy attached.

The **Observatory Director's Report** was given by Director, Gerry Samolyk. He mentioned that the Z-scope drive is still not working reliably. Several work parties were organized to widen the parking lot. He introduced a wide field CCD Camera usable for photometry. He also mentioned that Epsilon Aurigae eclipse is coming to an end. The LX-200 scope shed does not have name since it was built in 2007. It is going to be named after founding member Jim Toeller.

Old Business - May elections are coming up and four Board positions are up for election. Brian announced that the unexpired term for Virgil Tangney's Board position also needs to be filled. If interested, talk to Brian or another Board member.

Dues increase recommendation by the Board has to be approved during Election Meeting by the majority of members present.

Success of the first Public Night was acknowledged, and member were encouraged to sign up for the upcoming ones as volunteers. Volunteers in all areas are needed, including helping in the parking lot and showing objects to visitors through telescopes.

New Business - Russell Chabot mentioned that the next work party will be moved from Saturday to Sunday because of weather conditions. He is organizing further work parties to finish cleaning up the parking lot.

Correspondence - There was non.

The Program Dr. Paul M. Rybski, Associate Professor at the Department of Physics, and Director of the Whitewater Observatory at the UW-Whitewater was presenting a lecture on the specifications for the HDI detector system, now under construction at the University of Hawaii, and how this higher-resolution and faster system will greatly improve the way science is done on the WIYN 0.9 meter telescope.

Our next Public Night will be on May 6th and Our next General Membership Meeting will be on May 20th, both to be held at the MAS observatory.

The meeting was adjourned at 9:18 PM

Astronomy Events

Public Observing Nights

The second Public Observing Night was held with even better turnout (60-70 persons) despite the cloudy sky. Steve gave a presentation about the Meteors. Later in the night the sky has cleared and guests were able to observe. We collected $90 from parking fee ($5/car) for the MAS .

2011 Public Observing Nights	
April 8	The Moon
May 6	Eta Aquarid Meteors
May 27	Saturn's Rings
June 24	The Sun & Sunspots
August 19	The Milky Way Galaxy
September 23	Galaxies
October14	The Fall Constellations

The third public observing night is scheduled for May 27th at 7:30PM at the MAS Observatory. Topic: **the Saturn**. The kind help of MAS members during the night is encouraged and highly appreciated.

5th Annual Bootleg Astronomers Star Party

The 5th Annual Bootleg Astronomers Star Party will begin at 10 AM on Friday June 3rd thru Noon, Sunday, June 5th, at Green River Conservation Area , Harmon Illinois.

Come and explore the night skies with us under some of the darkest skies in the State of Illinois. We promise... You will be "WOWED"! Upon your arrival you will receive an informational packet full of goodies, provided by us, including your ticket for our fabulous door prize give-a way. We will provide free coffee, hot chocolate, & tea both nights. Tent & RV camping. Water and sanitary facilities on site. Electricity to charge your batteries/packs is available as well. We will provide several battery chargers for your use. (note, this is a wilderness area). Motels are available in nearby Princeton off I-80. This is a big birding area as well as the Land of Lincoln for daytime excursions. Hunting & fishing as well.

Come and Celebrate with us at our Spring Star Party. Only $25.00 for one or both nights if you register by May 28th. The price after that date is $40.00. Please visit our website at http://bootlegastronomy.com for our registration form.

We will also have T-shirts for sale & as usual this years' shirt will be a visual treat for your eyes designed by Mike Foster! Welcome aboard Matey's ! No one walks the plank at this "Party". And We do mean "Party" ! "Bootleg Astronomers", Pillaging the Universe one Star at a time".

The Madison Astronomical Society Open House/Swap Meeting

The Madison Astronomical Society is having an open house/swap meet. You and your club members are invited. It will be held at our observatory grounds, the Yanna Research Station on the afternoon of June 18 (19 rain date) and there will be observing that evening, weather permitting.

Full details and directions are available at:
http://madisonastro.org/news/events/Swap_Meet_and_Picnic_2011_06.pdf.

All area amateur astronomers/observers are invited to bring a table and set up to buy/sell/trade at this FREE event. Please RSVP to darksky2500@gmail.com if you plan to attend.

Observatory News

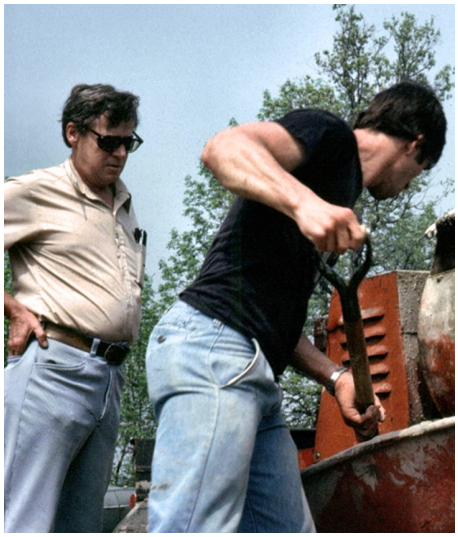
The Jim Toeller Observatory

In 2007, Henry Gerner and I built the most recent addition to the MAS Observatory. This shed currently houses a 10" f6.3 LX200 telescope and a ST9E CCD camera. A filter wheel on this camera contains an R, G, B, and clear filter set for color imaging as well as a Johnson V filter for photometry. This has become one of the most used scopes at the MAS site. In April, the MAS board voted to name this observatory for one of our founder members, Jim Toeller.

Jim Toeller Observatory

Jim joined the MAS in the 1960's. An avid telescope builder back in the days when amateurs ground their own mirrors, Jim was one of the key people in the construction of the MAS portscopes in the early 1970's. He was also on the committee that came up with the first concept designs for Z scope. Shortly after he recovered from a heart attack, Jim helped out with the construction of Z building and Z dome.

After Jim served as both the vice president and president of the MAS, he became our treasurer for over 10 years. I recall him giving the treasurer's report at our monthly meetings at



Jim Toeller (left) and Gene Hanson mixing mortar for the construction of the Z building (1980)

UWM. He would always jingle the money in his pocket as he gave the numbers.

As an observer, Jim was active in both standard and grazing occultations of stars by the Moon. He was also among the early MAS members who attempted to observe an occultation of a star by an asteroid. He had attempted variable stars but he was one of those people who could never see a difference in brightness from one star to another.

Jim passed away in 1998 (see the Nov 1998 issue of this newsletter).

by Gerry Samolyk

MAS Survey Evaluation

Our impromptu survey on astronomy classes at the MAS netted 7 responses (about 10% of the membership). Of those 7, 4 considered themselves beginners, and the rest considered themselves experienced or experts in astronomy. No one referred to themselves as novices. Of the total responses, the most common optical setup was a telescope with 8-inch aperture or smaller, followed by binoculars. (Most every one recognized that they observe with their eyes.) Interestingly, no respondents usually observe with MAS telescopes on key holder night.

Of the 7 responders, only 4 answered the question on what they are most interested in learning. Each respondent had their own answer, one each for learning how to use a telescope with setting circles, how to observe the planets, how to observer Nebulae and Galaxies, and one for how to observe variable stars.

Out of the 4 who responded to the question as to when was the best time to take an MAS class, 3 picked Saturday night, and 2 picked Friday night. The other weekday nights got one vote apiece as did a Saturday morning, and Saturday afternoon. Sunday evening got one vote as well. Sunday during the day was not selected by anybody.

The survey was written on a free account at survey monkey website. It was easy to use and provided useful tools for analysis of the responses. I would like to thank all of you who participated in the website.

by Neil Simmons

Spring Work Parties at MAS

In April-May period several work parties were organized by Russell Chabot to prepare the MAS for the public nights. Observatories were cleaned and the parking lots were cleaned and widened. After cutting trees and brushes almost twice as many cars can be accommodated as before. Participants were as follows: Russell Chabot, Jim Drzewiecki, Brian Ganiere, Agnes Keszler, Tamas Kriska, Jill Roberts, Gerry Samolyk, Neil Simmons, and Sue Timlin. (Photos by Agnes Keszler)

While Jim, Russell, and Tamas are trying to free up the jammed chain-saw, Neil is peacefully cleaning the B Dome that he adopted.

A bunch of trees had to be cut down in the east parking lot. Branches were piled up for burning.

While Sue was carrying logs manually, Russell was launching rocket-propelled ones towards Gerry's trailer.

Jim and Russell are posing with their hunting trophy before burning it (right).

Member's Stories

Remote Imaging Part 1: Why to do it

I have been interested in astronomical imaging for a long time. Early on, I was amazed that film and a small camera could capture things no scope could show, like Barnard's Loop. Imaging is not for everyone. But these days, with so many advances in products and services, amateurs can do super high quality work.

Remote imaging is a good fit for me. I have imaged at New Mexico Skies quite a few times. Understanding the process by being on site helps me understand and use resources remotely. I use Global Rent a Scope: www.global-rent-a-scope.com.

M106, Takahashi 250 Hyperbolic Astrograph, SBIG ST10XME camera, L channel: 8 x 8 minutes, binned 1:1, R, G, B channels 4 x 5 minutes, binned 2:2. Total exposure 2 hr 4 min.

They have facilities in New Mexico, Spain, and Australia. Because of this, you can image at any time somewhere in the world, if it is clear. Medium to large Takahashi refractors rent for lower amounts, high end large Ritchey-Chrétien systems rent for much more. All details are on the web site. They have tech support, but it helps greatly if you have done this before. Weather maps and webcams show you current weather conditions.

Why would someone want to do this? Imaging can be very difficult in Wisconsin. We are not exactly weather or light pollution friendly. While it is possible to lug all kinds of equipment to a remote site, get aligned, and set up everything, practically, it is nearly impossible. A solution that works for many is having an observatory in your back yard. You can go out when the weather is favorable, flip the switch, and start imaging.

One of the big draws for me is be able to image from Australia, and get images from objects I cannot see in Wisconsin. Also, sites out west are at high altitude, and far from cities, and that means dark nights with low humidity. They also have very accurate, high quality mounts. The advantage of this is that you can take fewer longer exposures, rather than many shorter ones that would be necessary with a poorer mount. Longer exposures result in better image quality. The software for running this is great, and you can 'watch' the scope do everything: search, center, focus, get guide star, guide, obtain images, change filters. Resultant files are available via FTP Surfer to copy down to your computer. You get the raw images, and fully reduced ones (dark, flat, and bias subtracted). This helps a lot. You can then finish processing yourself.

Lot of people who image in their yard, or at a club's observatory, image in a shed or room that is a number of feet from the telescope. When you think about it, it doesn't matter at all if this distance is 10 feet, 1 mile, or 12,500 miles. Also, this equipment is very expensive, and can obsolete quickly. Renting it when you need it frees you from constantly upgrading, and getting components and software to work well with each other.

Like I say, this is not for everyone, but it offers many advantages. The next article will get into the actual mechanics of remote imaging.

by Tom Schmidtkunz

In the Astronomical News

Andromeda's Once and Future Stars

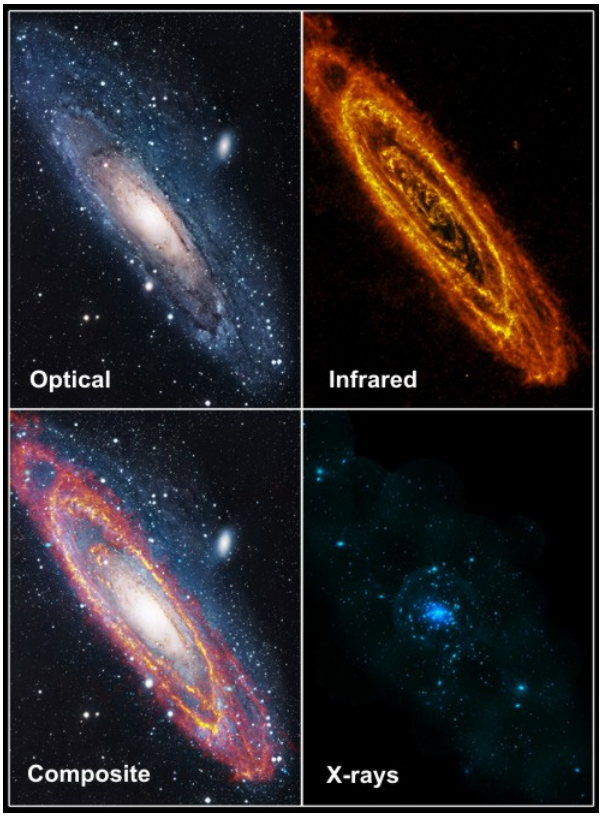
Two ESA observatories have combined forces to show the Andromeda Galaxy in a new light. During Christmas 2010, ESA's Herschel and XMM-Newton space observatories targeted the nearest large spiral galaxy M31. This is a galaxy similar to our own Milky Way -- both contain several hundred billion stars. This is the most detailed far-infrared image of the Andromeda Galaxy ever taken and shows clearly that more stars are on their way.

Sensitive to far-infrared light, Herschel sees clouds of cool dust and gas where stars can form. Inside these clouds are many dusty cocoons containing forming stars, each star pulling itself together in a slow gravitational process that can last for hundreds of millions of years. Once a star reaches a high enough density, it will emerge from its birth cloud and become visible to ordinary telescopes.

Many galaxies are spiral in shape but Andromeda is interesting because it shows a large ring of dust about 75 000 light-years across encircling the centre of the galaxy. This dust ring may have been formed in a recent collision with another galaxy. This new Herschel image reveals yet more intricate details, with at least five concentric rings of star-forming dust visible.

Whereas the infrared shows the beginnings of star formation, X-rays usually show the endpoints of stellar evolution. XMM-Newton highlights hundreds of X-ray sources within Andromeda, many of them clustered around the centre, where the stars are naturally found to be more crowded together. Some of these are shockwaves and debris rolling through space from exploded stars, others are pairs of stars locked in a gravitational fight to the death.

In these deadly embraces, one star has already died and is pulling gas from its still-living companion. As the gas falls through space, it heats up and gives off X-rays. The living star will eventually be greatly depleted, having much of its mass torn from it by the stronger gravity of its denser partner. As the stellar corpse wraps itself in this stolen gas, it could explode.



Credits: ESA/Herschel/PACS/SPIRE/J.Fritz, U.Gent/XMM-Newton/EPIC/W.Pietsch, MPE

Both the infrared and X-ray images show information that is impossible to collect from the ground because these wavelengths are absorbed by Earth's atmosphere. The twinkling starlight seen from Earth is indeed a beautiful sight but in reality contains less than half the story. Visible light shows us the adult stars, whereas infrared gives us the youngsters and X-rays show those in their death throes.

To chart the lives of stars, we need to see it all and that is where Herschel and XMM-Newton contribute so much.

Adopt a Telescope Program - Signup Sheet

	Adoptee	Scope	Location
1	Sue Timlin	18" F/4.5 Obsession	D Shed
2	Neil Simmons	12.5" F/7.4 Buckstaff	B Dome
3		12.5" F/9 Armfield	A Dome
4	Dan Yanko	10" F/6 Newtonian	Albrecht Observatory
5	Tamas Kriska	25" F/15 Zemlock	Z Dome
6	Henry Gerner	12" LX 200	Tagney Observatory
7		14" Z-Two scope	Ray Zit Observatory
8		10" LX 200	Jim Toeller Observatory

- Telescopes still waiting for adoption

At Your Service

Officers / Staff

President	VACANT	
Vice President	Brian Ganiere	414-961-8745
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Secretary	Lana Silke	262-966-4929
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Asst. Observatory Director	Henry Gerner	414-774-9194
Editor	Tamas Kriska	414-475-6267
Webmaster	Steve Diesso	262-641-0331

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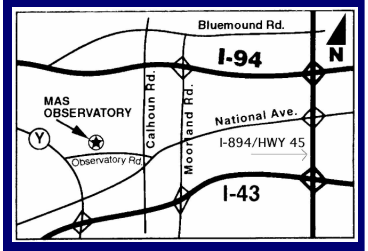
Henry Gerner	414-774-9194
Chris Hesseltine	414-482-4515
Al Hovey	262-524-5510
Jill Roberts	414-587-9422
Lana Silke	262-966-4929
Neil Simmons	262-889-2039
Sue Timlin	414-460-4886
Dan Yanko	262-255-3482

May/June Key Holders

5/21	Brian Ganiere	414-961-8745
5/28	Henry Gerner	414-774-9194
6/4	Chris Hesseltine	414-482-4515
6/11	Tim Hoff	262-662-2212
6/18	Scott Jamieson	262-896-0119



MAS Observatory

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