MILWAUKEE ASTRONOMICAL SOCIETY

FOCAL POINT

May, 2016

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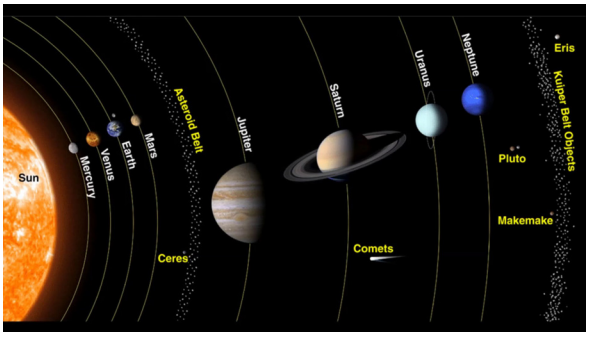
May 20th: Membership Meeting at the Observatory

The upcoming General Membership Meeting of the MAS is going to be held on May 20th, at 8:00 PM at the Observatory.

The speaker of the night will be Observatory Director, **Gene Hanson**, who will give a talk entitled: "What happened to Pluto?"



Astronomy is not normally controversial, but the status of Pluto as a planet in our Solar System ignites a lot of passion. Pluto was discovered in 1930 and was immediately labeled our 9th planet. And if you learned about the Solar System before August of 2006, you were taught that there are 9 planets. And then, suddenly, we had only 8 as Pluto was "demoted" as a planet. What happened? It is very understandable that the general public are confused, but even within the astronomy community this continues to be a topic of much debate. And Pluto has been much in the news recently because of NASA's New Horizons spacecraft which did a flyby and is now sending back very detailed images of this very mysterious and now much maligned world. Gene will discuss not just Pluto, but give you a tour of the Solar System and run through the myriad of definitions of planet over time.

The MAS Election

During the first half of the membership meeting we will have our annual election.

The second term of one Board member, and first term of three Board members will expire. Two eligible Board members are willing to run for the second term. If you are interested in serving a three year term on the Board please contact Observatory Director, Gene Hanson or any Board members or Officers.

From the Program Planning Committee Chairman, Brian Ganiere:

"I have enjoyed chairing the Program Committee for the past few years, but now I believe that it is someone else's turn for an opportunity to come up with fresh ideas for monthly membership meeting topics and guest speakers.

Per the MAS bylaws, the Program Planning Committee is a standing committee, and the newly elected President (during the election meeting, Friday, May 20th) appoints members to chair the standing committees.

The Program Planning Committee chair arranges programs for the September - November, and January - April membership meetings, for a total of seven programs during the year.

If you are interested, please contact the President, Tamas Kriska, or myself. I am willing to assist to get the newly appointed chairperson started. "

Observatory Report

We are still waiting for sustained better warmer weather so we can begin construction on the new solar observatory. But we are still waiting for both the telescope and the observatory to be delivered. Paul Borchardt has manufactured the mount that was detailed in last month's report.

We also had a very successful work party to remodel the Z Dome office area. This was detailed in the April Focal Point.

Website Report:

PayPal - My big thanks to Sue Timlin for getting the club PayPal account certified so there is no longer a monthly transfer limit and we can put a donate button on our website which I have now done. The link to the (to be continued on page 3)

Treasurer's Report

$11,078.08	***Starting Balance as of 3/17/2016***
	Expenditures
$65.64	WE Energies
$2.46	PayPal Fees
$1379.00	Solar Scope project
$511.00	Foremost Insurance
$120.00	Web Hosting
$95.61	Water/Sewer
$840.80	Tree Cutting
$10.03	Control Room
-$3,024.54	TOTAL Expenditures
	Revenue
$1,519.00	Donations
$138.00	Membership Dues
$15.00	Book Sale
$1,672.03	TOTAL Revenue
$9,725.57	***Ending Balance as of 4/13/2016***

Respectfully Submitted,
Sue Timlin, Treasurer

Meeting Minutes

Held on April 15th at the Retzer Nature Center, Waukesha. The meeting was called to order at 8:00 PM by President, Tamas Kriska.

Minutes, **Treasurer's Report**, **Observatory Director's Report**, and the **Membership Report** were submitted electronically.

Old Business - The tree removal was completed.

Paul is working on the Solar Observatory wedge. Delivery of the scope and the POD is scheduled by the end of April.

Z-building office remodeling update: magazines were discarded, books are on sale. Wall painting and ceiling tile replacement are finished, the new hard wood flooring will be put on during the coming weekend.

Adopt-a-scope program will start from scratch and be announced on the Google group. Ideally new members will be paired up with experienced ones giving the novices an opportunity to learn how to use the Club's equipments.

Quonset Hut remodeling: A fundraising page was put on the website.

New Business - During the Mercury transit (morning of May 9th) the Observatory will be open to members only.

The Program - Angela van Sistine PhD from UW Madison gave a presentation entitled "The cosmic star-formation rate".

The meeting was adjourned at 9:08 PM.

Respectfully Submitted,
Agnes Keszler, Secretary

Membership Report

Since the April Report we received 4 new membership applications and would like to welcome Thomas Frazier, Simon, Ron, and Patti Mork, Tom Kraus, Jodi Harper and Mark Tannis & Family. One application is pending. We now have 103 active members.

Respectfully Submitted,
Jeff Kraehnke, Committee Chair

Observatory Director's Report (continued from page 2)

page is currently under the "About MAS" tab, but it can me moved or we can have links from multiple locations.

Amazon Smile - I've now placed a link from the Member's Page for our members to sign up for Amazon Smile where a 0.5% contribution from many Amazon items is given to the society.

Quonset Hut Remodel Project - Working with Tamas Kriska, I've now placed a whole section on the website to solicit donations for the Quonset Hut project. We have placed on our home page a prominent launching section to draw attention. We can accept donations via check or with a credit card through PayPal.

Facebook - Since Facebook changed their distribution algorithm which often results in people liking our page seeing 50% of our postings, we have been working again on trying to get more "likes" on our club page. I also put a link to Facebook on our website which does result in getting additional likes. About a year and half ago we sat at 114 likes, and this week we hit the 250 mark!

Respectfully Submitted,
Gene Hanson, Observatory Director

Adopt a Telescope Program

Couple of years ago we started an adopt -a-telescope program that was working for a while. However, it failed to follow the changes in the adopters activity and fell apart. Now we will try to restart it in a slightly different fashion.

Lately we acquired several new telescope systems and we are in process to build even more. It is great for the Club, but it comes with a cost of more maintenance. The new adopt-a-telescope program is intended to accomplish two goals. It would spread out a little bit the burden of maintenance among members, but on the same time it would provide a chance for newer and older members alike of learning how to use MAS equipment.

The following will be the roles and responsibilities of the adopters:

- Perform monthly inspections of the observatory & its equipment (test it; clean it; check if everything is stored properly)
- Be the first point of contact if somebody notices an issue (communicate the need for repair/calibration or do it if capable)
- Attend annual clean-up
- Perform monthly checkup and log it in
- Be willing to teach other members how to use the equipment
- Maintain MAS membership in good standing
- Surrender adopt-a-scope when unable to commit to the above.

The goal is to find one experienced and one beginner member adopter for each telescope. This way new members would be able to learn the use and maintenance under supervision of experienced users. New members, if they wish, would be able to rotate to new telescope from time to time.

If you are interested in participating please contact Observatory Director, Gene Hanson or any other keyholder.

Bob Manske Passed Away

A few days ago news broke that our long time member and former president Bob Manske had died of cancer. Bob joined the MAS in 1997, served as Board Director and President in 2004-2005, and was the first webmaster of the Club. Bob was also very well known for his passions for ancient languages (including Egyptian hieroglyphics), and military history. Many Club members that knew Bob will miss him greatly.

"Bob Manske had served on the MAS Board of Directors, and was MAS President during 2004-2005, I believe. He impressed me with his intelligence and his breadth of knowledge." - Brian G.

"Bob was president in the time around 2004. He had a great sense of humor; loved observing; hated telrads. I believe he lived in Sun Prairie, and he regularly came to meetings, so he generally was always the one who came from the furthest distance. I recall he had white bushy hair, was a good president, and was a funny guy who loved astronomy. Either M16 or M17 was his favorite object." - Tom S.

Gene Hanson, Bob Manske, Ed Halbach, Gerry Samolyk, Rudy Poklar

"I knew Bob through the AAVSO meetings. Attached is a picture from our website taken in Tucson, AZ, at the 2003 Spring Meeting of the AAVSO. Those pictured were in the MAS. Left to right: Gene Hanson, Bob Manske, Ed Halbach, Gerry Samolyk, and Rudy Poklar." - Gene H.

"Sorry to hear of Bob's passing. I had a lot of fun with Bob, on the camp outs, variable star observing and the meeting after the meetings at the Oakland Trattoria in Milwaukee. He will be missed." - Henry G.

"At the Greenbush campouts, Bob was best known for his "lawn mower" telescope, a dob built on a lawnmower base on wheels. He used that very portable scope for many of his visual observations. Bob was an old time observer who liked to star hop and use a good finder. He did not use setting circles (or Telrads).

For the past few years, Bob has been doing photometry with a DSLR using the G color to approximate the visual band. Most of his photometry was on eclipsing stars. I just published times of minima from some of Bob's observations in the latest issue of the JAAVSO. Bob was at the AAVSO spring meeting a year ago where we had a chance to discuss a number of topics. He had signed up to attend the AAVSO spring meeting last weekend in Saint Louis, but had to cancel due to his declining health. " - Gerry S.

Bob Manske with his iconic lawnmower telescope

Observatory News

Z-dome Office Remodeling

Due to dedicated effort of Jeff Kraehnke and Tamas Kriska the remodeling has been finished in four consecutive weekends. After emptying the room and removing the old broken tiles from the ceiling, grids were painted white while the walls were painted to a warm dark green color. Brand new white ceiling tiles were installed, and a mocha birch hard wood flooring was laid to give the room a homey feeling. After putting back the computers and the new black leather executive chairs, and mounting a 39'' HDTV on the wall the old library turned into a modern control room.

The remodeling of the entryway and stairs will be completed in the next phase.

Observatory News

Pouring the Solar Observatory Concrete Pad

The Lunt solar scope has finally arrived, now we are waiting for the POD which can be shipped anytime. We wanted to get the site ready to accommodate the dome as soon as it arrives. On Saturday, May 7th weather was perfect for pouring the concrete, and ten enthusiastic members shared the task. Thanks everyone!

Observatory News

May 9th Transit of the Mercury

On May 9th at 6:11 AM when the transit started the sky was covered with clouds and the forecast was not promising at all. However, during the morning there were moments when it cleared up for a short time to give a chance to take a peek at the Sun and the transiting planet. The Observatory was open, and some of us were able to look through the brand new Lunt solar telescope mounted on a tripod. We could not take pictures, but fortunately several members in various locations got better luck with imaging the event.

Gabe Shaughnessy: The clouds seem to have parted. We still have some thin clouds around though, so the transparency isn't the best, but this was one shot I was able to get with my phone.

For more information on Mercury transit see article on the next page.

Ron Zoltowski: I managed to get a few pictures in between the clouds. Used a 5" refractor and Canon T3i. Too bad we couldn't see it in it's entirety.

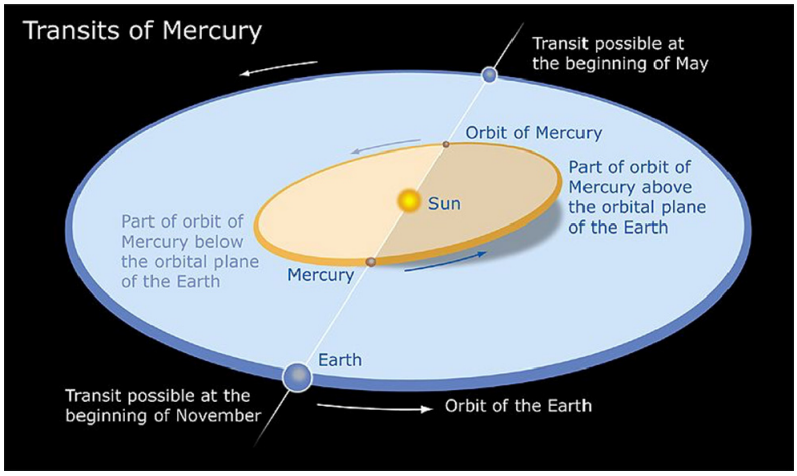
John Asztalos: Here's my take from about 10:00 AM MDT (in Colorado). Mostly clear, but the seeing is mediocre.

In the Astronomical News

Mercury is Making a Rear Transit Across the Sun

On average, transits of Mercury occur about 13 or 14 times every 100 years. The last one took place in 2006, and the next one won't occur until November 11, 2019. After that, we won't see another until 2032.

Why so uncommon? For a transit to occur, the sun, Mercury, and Earth all have to line up directly. But Mercury's orbit is inclined by about 7 degrees compared with Earth's. So there are only two spots where the two planets *could* conceivably line up with the sun — the places where Mercury crosses the Earth's orbital plane. Earth lines up with these intersection spots around May 8 and November 10 each year, give or take a few days. If Mercury, which takes 88 days to orbit the sun, is also wandering through at the same time, a transit occurs. This happens once every seven or eight years. When Mercury crosses the face of the sun, it will be more than just a gawk-worthy spectacle. Scientists will be watching the transit closely to glean all sorts of new insights about space. And this is nothing new: Transits have been teaching us an enormous amount for centuries now.



Credit: European Southern Observatory

Back in 1677, astronomer Edmond Halley watched Mercury cross the sun and noted that if a transit were to be observed from different latitudes on Earth, the different observers would all see Mercury cross the sun along at a slightly different angle. Those various angles could then be used to calculate the distance between the Earth and the sun — which was still something of a mystery.

Decades after Halley died, during the 1761 and 1769 transits of Venus, scientists from around the world collaborated and used his method to calculate that the distance between Earth and the sun was about 24,000 times Earth's radius. That was only about 3 percent off the real value. Not too shabby.

Then, in the 20th century, as Lyle Tavernier of NASA's Jet Propulsion Laboratory explains, scientists realized they could use transits to study the thin layer of gases that surround Mercury, known as an "exosphere." "Sodium in the exosphere absorbs and re-emits a yellow-orange color from sunlight, and by measuring that absorption, we can learn about the density of gas there," NASA scientist Rosemary Killen tells Tavernier.

During the May 9, 2016, transit, scientists at the Big Bear Solar Observatory in California will try to catch a glimpse of sodium in the planet's exosphere, in order to better understand how it escapes the planet's surface.

Also exciting: When Mercury passes in front of the sun, it causes a slight dip in the sun's brightness. In recent decades, astronomers have realized that they can look for similar brightness dips in distant stars to detect the presence of exoplanets — other worlds that might even contain life: NASA's Kepler mission has found more than 1,000 exoplanets using this method. And scientists will be studying the dips in light during Mercury's transit on May 9 to help better refine this method.

Meanwhile, NASA will be using the transit to calibrate instruments on two of its space telescopes, SDO and SOHO — including how to handle stray light on the images they collect.

All in all, this will be the most studied transit of Mercury in history. "It used to be hard to observe transits," SOHO project scientist Joseph Gurman said in a press release. "If you were in a place that had bad weather, for example, you missed your chance and had to wait for the next one. These instruments help us make our observations, despite any earthly obstacles."

by Brad Plumer, Vox

Adopt a Telescope Program - Signup Sheet

	Adopter	Scope	Location
1	Sue Timlin	18" F/4.5 Obsession	Wiesen Observatory
2		12.5" F/7.4 Buckstaff	B Dome
3	Paul Borchardt	12.5" F/9 Halbach	A Dome (Armfield)
4		18" F/4.5 Obsession (Kyle Baron)	Albrecht Observatory
5	Jeff Kraehnke	14" F/7.4 G-scope	Z Dome
6	Lee Keith	12" F/10 LX200 EMC	Tangney Observatory
7		8" F/11 Celestron EdgeHD	Ray Zit Observatory
8	Tamas Kriska	14" F/1.9 F-scope	Jim Toeller Observatory

At Your Service

Officers / Staff

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Observatory Director	Gene Hanson	262-269-9576
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Lee Keith	414-425-2331
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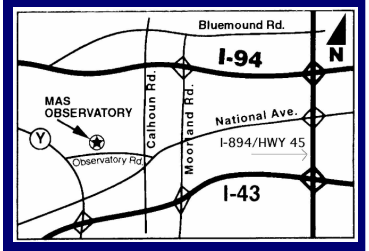
Jeff Kraehnke	414-333-4656
Agnes Keszler	414-581-7031
Tamas Kriska	414-581-3623
Sue Timlin	414-460-4886

May/June Keyholders

5/21	Tamas Kriska	414-581-3623
5/28	Sue Timlin	414-460-4886
6/4	Lee Keith	414-425-2331
6/11	Frank Kenney	414-510-3507
6/18	Henry Gerner	414-774-9194
6/25	Tamas kriska	414-581-3623
7/2	Mike Smiley	262-825-3981



MAS Observatory

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