



June, 2019

Summer Schedule

The Milwaukee Astronomical Society does not have Membership Meetings during the summer months of June, July, and August. However there is a Board Meeting on the second Monday of each month starting at 7PM at the Observatory. The next one is scheduled on July 8th. The Board Meetings are open to the membership and everybody is welcome who is interested in organizational and Observatory related issues.

As always, the Observatory is open on Saturday nights, and also when posted on the Google Group.

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MAS Picnic



The MAS organizes its Annual Picnic on **Saturday, August 10th starting at 4 PM** at the Observatory.

We will be having a potluck, a dish to share is appreciated. Soft beverages and charcoal grill will be provided.

The picnic will be held in rain or shine. Weather permitting solar observation is possible.

Please join us, and bring along family and friends.

Public Nights



The Open House season has started on the Saturday afternoon of June 22nd with a daytime event, since the topic was the Sun. Clouds were coming and going, most of the visitors were able to view the Sun through three hydrogen alpha solar scopes, the one the Club has, and two others that Gabe Shaughnessy and Jeff Kraehnke brought along. Some telescopes were set to the Venus and Mercury.

Kids were anxious to collect stickers at every stations and were rewarded with a Milky Way candy bar. Sue Timlin gave her presentation twice during the afternoon.

Our next Public Night will be on Friday, July 19th starting a 8 PM. This night is dedicated to the 50th anniversary of Apollo 11's Moon landing. Our speaker will be Gene Hanson.

Any help from members willing to man a telescope, give a tour of the Observatory, or direct the traffic in the parking lot is highly appreciated!

Observatory Report

There were 14 stumps removed from the Observatory grounds this last month. They were from the large pines by the parking lot, the apple trees, and the cedars that were removed from the west side of the Z-building. The total cost for the removal and cleanup was \$500.

Mike Wagner has installed new wiring on A-Scope's mount that allows the clock drive to go into a lunar rate with the flip of a switch. The power switch for the drive motor has been repurposed and is now used to change the tracking rate from sidereal to lunar. This will make imaging of the moon a lot easier. I don't have the exact cost for this upgrade from Mike, but I think it was around \$25. Thanks Mike!

The annual spring cleanup was held on June 1st, quite a few members turned out to help and even though there was an hour rain delay, much work got done and the Observatory looks great. Thanks to all who attended!

Use of the Observatory and its equipment continues to be slow due to the lack of clear nights that has been the case this spring.

Respectfully Submitted,
Paul Borchardt, Observatory Director

Treasurer's Report

\$7,615.79	Starting Balance as of 05/15/2019
	<u>Expenditures</u>
\$2.34	PayPal fees
\$87.00	Periodic expenses
\$75.00	Small TV screens
\$52.37	WE Energies
\$216.71	TOTAL Expenditures
	<u>Revenue</u>
\$75.00	Private donations
\$79.00	Membership dues
\$50.00	Key deposits
\$25.00	Astro image sale
\$229.00	TOTAL Revenue
\$7,628.08	Ending Balance as of 06/08/2019

Respectfully Submitted,
Sue Timlin, Treasurer

Meeting Minutes

The meeting was held on June 10th at the MAS Observatory, New Berlin and was called to order at 7:03PM by Tamas Kriska President.

Minutes, Treasurer's Report and Observatory Director's Report electronically submitted ahead of the meeting were approved.

Membership Committee Report was electronically ahead of the meeting. Applications of Ethan Charles Hicks and Danita Kannenberg & family (both gift memberships) were approved.

Old Business – The 8" Celestron EdgeHD : Tabled until Steve Volp has new proposal regarding the project. *Maintenance budget*: All materials will be ordered when Menards is having an 11% sale. After that a work party will be announced. *Talk request*: Sue might be interested in giving a talk at the Cedarburg and Eagle Public Libraries, depending on demand. She will contact both libraries.

New Business – New MAS laptop: All necessary programs for imaging were installed to the laptop that Jason had donated. However, the solar camera can be operated only by 7 frame/s acquisition rate under Windows 10. Gabe offered help to put on a virtual Windows 7. If that does not work out we consider replacing the camera. *Summer picnic*: The picnic has been scheduled for August 10th at 4PM. *Solar scope*: Motion was made and carried to allocate \$47.00 to purchase a shield. Paul will take care of that. *Board Meeting dates*: Russ Blankenburg suggested putting the meetings to the same day of each month all over the year. He and Jeff will work on surveying the membership. *Motorized gate*: Research will be done about the possibilities.

Announcement – Three Observatory Tours are scheduled for this week. Help is appreciated. Speaker for the October 5th Public Night is still wanted.

The next meeting will be on Monday, July 8th.

Respectfully Submitted
Agnes Keszler, Secretary

Membership Report

Since the last Report we received 4 applications. We welcome Ethan Charles Hicks, Danita Kannenberg & family, Michael Prator, and Akshat Agrawal. The total number of active members is 156.

Respectfully Submitted,
Jeff Kraehnke, Committee Chair

Observatory News

An Updated MAS Website

Our website was overdue for an update to make it more mobile friendly. This has been a problem for a while and only getting worse as more people use their phones for internet access. I was daunted by the amount of work this would take, but that seemed to pale in comparison to how to technically get it done. It seemed relatively easy to create a good mobile site, but I didn't wish to sacrifice the look and feel of the current site. And I had another requirement: it had better be fun. After all, this is a hobby!

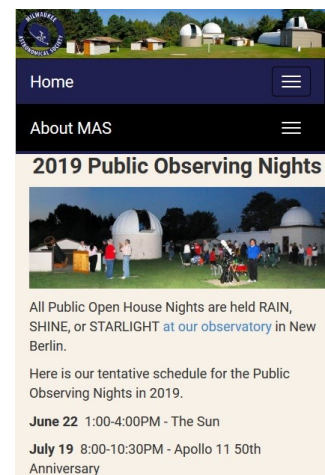
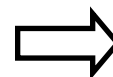
I finally sought help from MAS member, Steve Volp, who has helped previously on the website, especially with the Messier Showcase. He suggested the use of Bootstrap, a widely used free and open-source CSS framework for web development. To demonstrate, he converted our Contact Us page. This example along with the large amount of online documentation and samples made it all seem doable.

For my own demonstration, I coded our About MAS page which, frankly, was easy by itself, but there seemed to be endless tweaking. And a large amount of that adjusting came from the new dropdown menu design both Steve and I wanted. From there it was onto the main hurdle of the project: the Home Page. As that page came together it was clear that the entire project was both practical and achievable.

It's impossible to say how long it's going to take to get the entire website converted, but I've decided the only practical transition is to roll out the sections as they are finished and tested. The priority ones are the application pages (regular, gift, and renewal) and then the ones that are most popular according to the logs.

As this is rolled out, I will value any feedback from members pointing problems or suggestions.

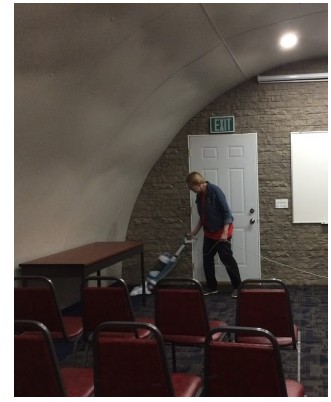
Gene Hanson
Webmaster



Observatory News

Spring Cleanup Work Party

Every spring the Club organizes a work party to prepare the Observatory for the Public Night season. The forecast for Saturday, June 1st was pretty bleak, and sure enough we had a heavy shower right after the start time. Luckily, it quickly cleared out and we could finish our chores. A big thank you to all participants!



Observatory News

The Ray Zit Observatory Re-Build Has Started

On the last weekend of June the re-build of Ray Zit Observatory has started. The focus was on the roof. All the rotten wood was replaced, the joists were further elevated, the front was modified accordingly. New roofing was installed as well as new siding covering the front and back part of the roof. Thanks again to everybody who participated!



Astronomical News

Wisconsin Observers Weekend



The WOW was hosted by Northeast Wisconsin Stargazers (Newstar) on the last weekend of May at the Hartman Creek SP. Since this was my very first starfest I didn't know what exactly what to expect. I concentrated on getting a spot so that I could set up close to my truck so I didn't have to haul very far. Of the other scopes, dobs were the most numerous since they are easy to setup and are reasonably priced for large apertures. There were a few refractors, and a few SCT's like my C14. Though most attendees were from various Wisconsin clubs, a few people came from Illinois and even Iowa. Everyone was so nice. I came away after meeting a lot of other enthusiasts and I could never remember all their names. The MAS was represented by John Asztalos, Paul Borchardt, Scott Jamieson and I.

Unfortunately, on the first night the smoke cut seeing to zilch. We have a dozen scopes set up and it was just about all we could do to use a polemaster to find Polaris. If it weren't for GOTO we wouldn't have seen even a little smudge for M13. All of Hercules was buried in the mud. Even Jupiter was hard to get in the scope, but then when we found it was blood red. Lots of good conversations with everyone but most scopes sat idle.

Day 2 was a rainout, but day 3 turned out to be a decent viewing night. The last of the clouds cleared after supper time, with only a little of the smoke layer remaining. There were close to 20 scopes setup in group area 1. There was a constant train of pesky clouds that made it only a visual night. Not a good night for imaging. But we did have two passes of the ISS to keep us looking up. Everyone kept going from faint fuzzy to cluster and finding new things to look at. Eventually the Milky Way was clearly visible as it rose out of the Waupaca sky glow. Viewing Jupiter was reasonable, but Saturn

was low in the boiling soup. It was nice that there was a good number visitors around so we had always a group of excited viewers when an object was located. A pair of young teenage boys was trying hard to get their very first point and shoot (and pray) DSLR images with a dob they brought. I got to see a lot of other scopes with their various eyepieces to see how much of difference that alone can make. There were snacks and cupcakes on a center picnic table for when clouds gave us pause. Finally the group slowly thinned out and viewing lines dissipated, people packed up, dew from the rainy day settled in. Scott and I were the last of the hard core people out.



I had a great time and met a lot of people and learned about other easy to attend star parties. Now I have a short list of other star parties on my GOTO list. I'll be doing this one again, and I have already signed up

for Northwoods Starfest (August 2-4, Fall Creek, WI), and the Nebraska Star Party July 28-August 2, Valentine, NE) is also on my bucket list.

by Mike Bauer

In the Astronomical News

Table Salt May Be Hiding in Europa's Underground Sea

What flavors our food may also season the sea of Jupiter's moon Europa.

Sulfate salts were thought to lurk in the watery ocean under the moon's icy crust. But data from the Hubble Space Telescope suggest that common table salt dominates the sea's chemistry, researchers report June 12 in *Science Advances*.

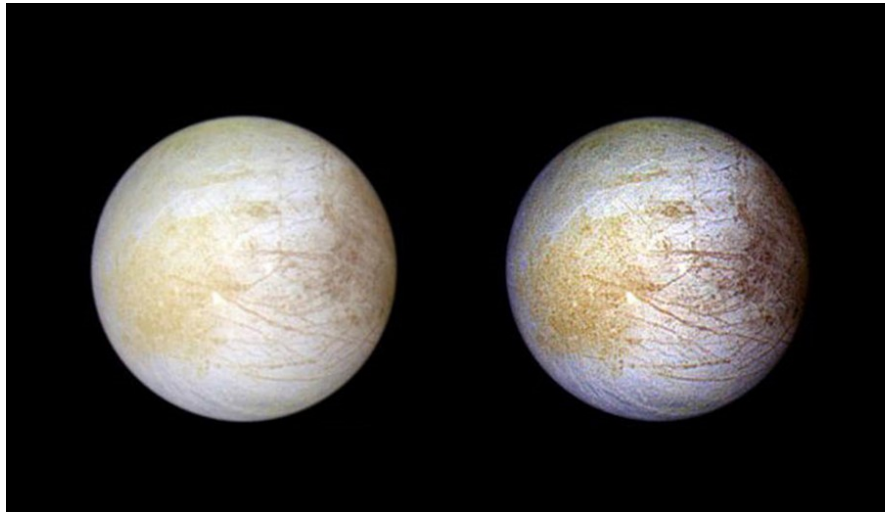
"This could mean that the ocean chemistry is more similar to what we're used to on Earth and what we see at En-

celadus, which is an ocean moon of Saturn," says Samantha Trumbo, a graduate student in planetary sciences at Caltech.

The scientists surveyed Europa's chaos terrain, or regions where the surface ice has been heavily disrupted, possibly by material swelling up from below. "If anywhere was going to represent the internal composition, it would be these places," Trumbo says.

Data from the Galileo mission in the 1990s had suggested a hidden sea containing salts, suspected to be sulfates. But later studies on infrared light reflected from Europa failed to find chem-

ical signatures for sulfates originating in the ocean. New data from Hubble homed in on Europa's visible spectrum and revealed that the chaos terrain of one of the moon's hemispheres contains the fingerprint of irradiated sodium chloride.



Rough Patches on Europa's surface may partly owe their yellowish hue to sodium chloride. Credit: NASA Galileo images.

When electrons crash into sodium chloride, as is thought to happen on Europa, the collision ejects chloride ions. Electrons fill these vacancies in the salt,

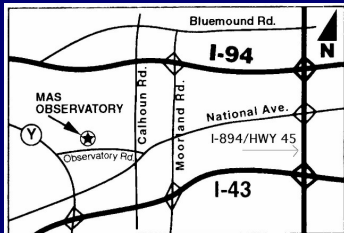
changing its color from white to a yellowish hue. That color matches what's seen in some of the moon's rough patches.

Liquid water is thought to be essential for life. If Europa's ocean turns out to be more similar to Earth's than was thought, that could raise tantalizing questions about the moon's ability to support life. "People think that, if there were a place elsewhere in the solar system where there might be life, Europa is a candidate," Trumbo says.

by Carolyn Wilke, sciencenews.org

Adopt a Telescope Program - Signup Sheet

	Adopter	Scope	Location
1	Sue Timlin/John Hammetter	18" F/4.5 Obsession	Wiesen Observatory
2	Steve Volp	12.5" F/7.4 Buckstaff	B Dome
3	Robert Burgess	12.5" F/9 Halbach	A Dome (Armfield)
4	Russ Blankenburg	18" F/4.5 Obsession	Albrecht Observatory
5	Jeff Kraehnke	14" F/7.4 G-scope	Z Dome
6	Lee Keith/Tom Kraus	12" F/10 LX200 EMC	Tangney Observatory
7	Herman Restrepo/Colin Boynton	10" F/6.3 LX200	Ray Zit Observatory
8	Tamas Kriska	Stellarvue SVQ 100 F/5.8	Jim Toeller Observatory
9	Paul Borchardt	Solar scope	SkyShed POD



MAS Observatory

18850 Observatory Rd
New Berlin, WI 53146

www.milwaukeeastro.org

At Your Service

Officers / Staff

President	Tamas Kriska	414-581-3623
Vice President	Lee Keith	414-425-2331
Treasurer	Sue Timlin	414-460-4886
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Observatory Director	Paul Borchardt	262-781-0169
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Webmaster	Gene Hanson	262-269-9576

Board of Directors

Jim Bakic	414-303-7765
Scott Berg	262-893-7268
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Clark Brizendine	414-305-2605
Jason Doyle	414-678-9110
John Hammetter	414-519-1958
Jeff Kraehnke	414-333-4656
Jim Schroeter	414-333-3679
Gabe Shaughnessy	262-893-4169
Steve Volp	414-751-8334
Mike Wagner	262-547-3321

July Keyholders

07/06	Paul Borchardt	262-781-0169
07/13	Brian Ganiere	414-961-8745
07/20	Steve Volp	414-751-8334
07/27	Lee Keith	414-425-2331