



August, 2020

## September Meetings

From September the Milwaukee Astronomical Society's monthly meetings will return to the regular format, a Board meeting followed by a Membership meeting. However, we are also going to try something new. Instead of Fridays the monthly meeting will be held on third Monday of each month.

The September **Board Meeting** will be on Monday, September 21<sup>st</sup> at 7 PM. It is open to every MAS member who is interested in organizational and Observatory related issues.

The Board meeting will be followed by the **Membership Meeting** starting from 8 PM. Program: presentation about **Lightning**.

In the first part of the presentation we will explore the physics behind it, occurrence of lightning across the Solar System, compare the lightning on other planets to what we can observe here on Earth. In the second part MAS member **Jack Roper** will talk about techniques of photographing lightnings. Being a professional photographer, Jack will illustrate his talk with some of his best photos.



Due to the COVID-19 pandemic all meeting will be via Zoom videoconference. Members will receive the link prior the meeting. If you are not a Board member but would like to attend please contact Tamas Kriska.

The **Imaging Focus Group** will meet on Wednesday, September 9<sup>th</sup> at 7 PM through Zoom videoconference. The specific topic of the meeting will be Optical and Electronic systems.

The **First Wednesday** How to Meeting will be held through Zoom videoconference on Wednesday, September 2<sup>nd</sup>, from 7:30 PM.

The MAS Google Group is as active as ever. Learn about the astronomical news, follow equipment related discussions, or just check out the latest images taken by fellow Club members.

## Public Nights Canceled

Due to the COVID-19 pandemic situation all Public Nights scheduled for the 2020 season are CANCELED.

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## Observatory Director Report

The B-Dome slit is broken again, same problem, the cables used for opening and closing. Several members worked for hours on Sunday without any success. We will try again, but there will be some investigation into determining the root cause of the cable failure first.

The week before we looked for the septic tank, but even with a site map, the location is still unknown. We re still looking of course.

Sale of the large donation has begun, so far the following items have been sold: Celestron Mount and tripod sold for \$900. Thank you, Mike Bauer, for your purchase! Sky Watcher 120mm F/7 Doublet Refractor sold for \$820 on the web. Astro Tech AT66ED APO Refractor sold for \$175 on the web. The total for the three items is \$1895 which will be added to the new telescope fund.

Again, I d like to thank the keyholders for their extra help in getting the Observatory open for the members. Coming out on nights other than Saturdays to get the Observatory open for the members is great. Keep up the good work and stay safe doing it.

Respectfully Submitted,  
Paul Borchardt, Observatory Director

## Treasurer's Report

<b>\$9,074.86</b>	<b>Starting Balance as of 07/11/2020</b>
	<b><u>Expenditures</u></b>
\$11.40	PayPal fees
\$65.42	WE Energies
\$76.82	TOTAL Expenditures
	<b><u>Revenue</u></b>
\$408.00	Membership dues
\$1.00	Grants
\$409.00	TOTAL Revenue
<b>\$9,407.04</b>	<b>Ending Balance as of 08/08/2020</b>

Respectfully Submitted,  
Sue Timlin, Treasurer

## Membership Report

Since the last Report we received 8 new applications. We welcome Ian Thomson & family, Abhishek Chitnis & family, and Vijay Kantamneni, Randy Levine & Family, Scott Johnson & Family, Jerome Williams, Scott Jackson & Family, and Michael S Coey. The total number of active members is 183.

Respectfully Submitted,  
Jeff Kraehnke, Committee Chair

## Minutes

Due to the COVID-19 outbreak the meeting was held via Zoom videoconference on August 10<sup>st</sup>. The meeting was called to order at 7:05 PM by Tamas Kriska President. The following Board Members were present: Jim Bakic, Mike Bauer, Paul Borchardt, Jeff Kraehnke, Dennis Roscoe, Gabe Shaughnessy, Sue Timlin, Steve Volp, Mike Wagner, and Agnes Keszler. Gene Hanson (FM), Brian Ganiere (FM), Randy Culp, and Russ Blankenburg were also present.

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

**Observatory Director's Report** electronically submitted ahead of the meeting was amended and approved. Amendment: Trees were trimmed to clear the front garage for re-roofing. The jammed door of the Z2 Observatory was fixed.

**Membership Committee Report** was electronically ahead of the meeting. Membership applications of Ian Thomson & family, Francisca Lopez, Dawn McElrone & family, Dawne Zaffke & family, Abhishek Chitnis & family, and Vijay Kantamneni were approved.

**Old Business – Garage re-roofing:** The site is ready for the company to start the work.

**Entrance gate:** The gate was ordered from Lowe's. Additional hardware will be purchased.

**Board and Membership Meetings from September thru November:** The meetings will be moved to the 3<sup>rd</sup> Monday of the month. Board meetings will start at 7PM, followed by the Membership Meeting at 8PM. Jack Roper, Randy Culp, and Dennis Roscoe volunteered as speakers.

**New Business – Instagram account:** Due to the lack of necessary maintenance the account will go dormant.

**Restroom accessibility:** The Observatory Committee will discuss how to make the restrooms available for active members who are not key holders.

**Wasp nest:** Paul Borchardt volunteered to remove the two huge wasp nests from under the Z-dome roof.

**Announcement –** The next meeting will be on Monday, September 21<sup>st</sup>, 2020 via Zoom videoconference.

Respectfully Submitted,  
Agnes Keszler, Secretary

## Maintenance

Despite the pandemic the maintenance work has continued during the summer. The crumbling shingles on the front garage were replaced by a Integrity Roofing LLT. To make the area accessible and to protect the new roof we had to trim the surrounding overgrown bushes and trees. While doing that the overflow parking lot was also cleaned.

The cable on the opening mechanism of B-dome slit broke once again. It took three days to figure out how to fix it. Now it works much better than before, hopefully it will hold for a while.

We also adjusted the jammed door in the Z2 Observatory by raising the right side of the roof.

The city requested pumping our septic tank. It was a challenge to locate it even with a help of old blueprints. Finally, it was found through the effort of several members. Mike Wagner coordinated the pumping and later installed a raiser.

The new A-dome steps were finally completed by installing a handrail.

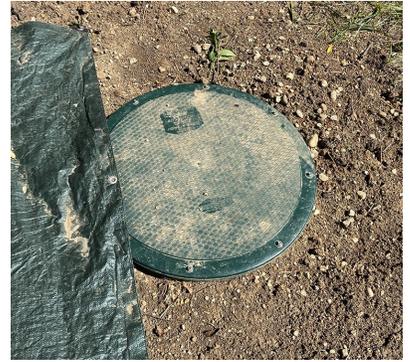


# Maintenance

## The Z2 door repair



## Pumping the septic tank



## Hand rail installation



## Member's Story

### Daytime Astronomy

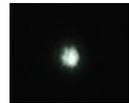
As a few of us headed out to the observatory Sunday afternoon to bring the club's B-dome up to the 1980's, we also made some time for catching some sun and observing the stars and planets. We have seen some great photos of the Sun. I would propose 3 other objects within reach of most members on a warm summer's day.

1. Venus is at it's furthest from the Sun right now- 45 degrees away, and 67 degrees up. It's at half-moon phase and should be visible in any telescope or binoculars if you know where to look. In fact, when looking along the outside of the telescope, I clearly saw it with the naked eye at 11AM (though there were doubters present). Remember, the club has an ultraviolet filter that allows us to see some cloud features.



2. The moon was at only 7% illumination- just 2 days until New Moon. It was very faint in contrast to the background sky, and does not photograph well at this stage. Again, visible in any scope, it looks like a thin wispy cloud through the naked eye.

3. If the Sun bothers your eyes to look at, take the next brightest star in our sky - Sirius. At magnitude -1.44 it was clearly visible in the finder scope and eyepiece. Here's proof.



Arcturus is the next brightest star in our hemisphere at magnitude 0. He transits at 1pm in October for those up to the challenge.

Obviously be careful around the Sun, but a goto scope or some amazing use of hands and fingers should put these 3 objects in most members' range.

Russ Blankenburg

### A Busy Night

Imagine this for an amateur astronomer. Drive 2.5 hours to White Mound County Park (met Jeff, Tamas & Agnes there), take images of Jupiter just before it reaches the meridian with 180mm Mak-Cass scope, observe deep sky objects with 16" Dobsonian scope until 2AM, pack up and drive back to observatory to image Mars with the "Planet Killer" "A" scope just as it reaches the meridian due south, get home just after 5am. 3 scopes in one night! Fun!!



Look at the Mars image! It is small but so is the planet. But since Mars has such a bright surface brightness due to it being closer to the Sun and high reflectivity, I adjusted the electronic gain (brightness amplification) so that the exposure was only 1 ms (1/1000sec)! And the seeing was pretty good too. I was shocked at the result! Lots of details. The best Mars image I have ever taken!!! Since Mars is so bright but small (less than 1/2 the size of mighty Jupiter) I may have to use a barlow lens to make it larger next time.

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Lee Keith

## In the Astronomical News

### NASA Telescope Uncovers the Cause of Betelgeuse's Mysterious Dimming

...And new observations suggest the red supergiant star is dimming again.

In the *Before Times*, when the coronavirus pandemic was only just beginning its grim march across the globe, our troubles were much farther away. About 640 light-years farther away, in fact. Astronomers observing Betelgeuse, a red supergiant star, had been puzzled by its mysterious dimming. Some believed the event, which lasted from November 2019 to February 2020, was a portent of doom signaling the star's upcoming explosion. Then the dimming abruptly stopped. Thanks to observations NASA's Hubble telescope, we might know why.

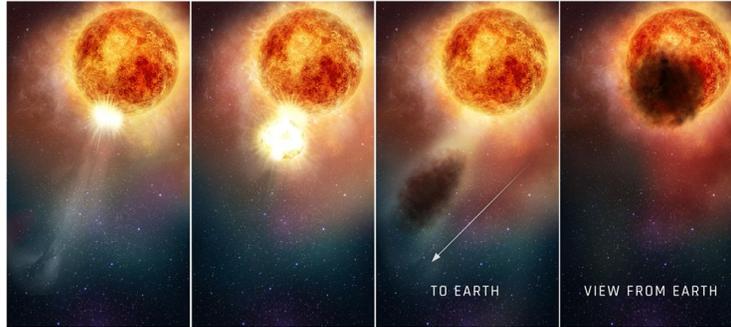
A new study, published in *The Astrophysical Journal* on Thursday examined ultraviolet light emitted by Betelgeuse during the "Great Dimming" event using the Hubble Space Telescope. Fortunately, the event occurred just as Hubble scientists were looking to observe Betelgeuse with the telescope, providing a chance to understand why the star had begun to go dark.

Betelgeuse is a massive star, about 700 times bigger than our sun. If you dropped it into our solar system, it would swallow Mercury, Venus, Earth, Mars, the asteroid belt's various worlds whole and Jupiter would end up as a snack, too. And it's coming to the end of its life cycle, sometime in the next 100,000 years. When the supergiant started to dim last year, there were some believers who thought the process of exploding may have begun.

The Hubble observations suggest differently. By looking at Betelgeuse at UV wavelengths, researchers were able to get a better look at the star's surface and atmosphere. They discovered a mass of bright, hot material

moving outward from the southern hemisphere of the star at around 200,000 miles per hour and eventually being ejected into space.

"This material was two to four times more luminous than the star's normal brightness," said Andrea Dupree, associate director at the Harvard-Smithsonian Center for Astrophysics and lead author on the study, in a NASA release. About a month after the outburst, the south part of Betelgeuse dimmed conspicuously, she said. Her team believe this material may have begun to cool down as it moved through space, forming a



*A NASA graphic showing how a dust cloud might obscure the view of Betelgeuse. Credit: NASA/ESA/E. Wheatley (STScI)*

dense dust cloud that partially obscured Betelgeuse. It just so happens that Earth was in the perfect position to "see" the dust cloud front on, as if Betelgeuse shot the dust cloud directly at us. If it happened on the opposite side of Betelgeuse, we'd likely never even know.

Explosive outbursts are expected from star's at the end of their life and when they die or "go supernova," they release a shockwave that spews elements into space. The activity is critical to fill space with heavy elements like carbon, which then can become new stars elsewhere in the universe, so these stars are critical to the cosmic Circle of Life.

Betelgeuse is still acting a little weird, however. Observations by NASA's Stereo spacecraft observed the supergiant between late June and early August and noticed Betelgeuse was unexpectedly dimming again. NASA notes further observations will be undertaken in late August, when the star returns to the night sky and can be seen by telescopes again.

Jackson Ryan, cnet.com

## Adopt a Telescope Program - Signup Sheet

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

### At Your Service

#### Officers / Staff

President	Tamas Kriska	414-581-3623
Vice President	Lee Keith	414-425-2331
Treasurer	Sue Timlin	414-460-4886
Secretary	Agnes Keszler	414-581-7031
Observatory Director	Paul Borchardt	262-781-0169
Asst. Observatory Director	Jeff Kraehnke	414-333-4656
Newsletter Editor	Tamas Kriska	414-581-3623
Webmaster	Gene Hanson	262-269-9576

#### Board of Directors

Jim Bakic	414-303-7765
Mike Bauer	262-894-1253
Jill Roberts	414-587-9422
Clark Brizendine	414-305-2605
Jason Doyle	414-678-9110
Dennis Roscoe	608-206-0909
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

#### September Keyholders

09/05	Sue Timlin	414-460-4886
09/12	Jim Bakic	414-303-7765
09/19	Mike Bauer	262-894-1253
09/26	Russ Blankenburg	262-938-0752



### MAS Observatory

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New Berlin, WI 53146

[www.milwaukeeastro.org](http://www.milwaukeeastro.org)