

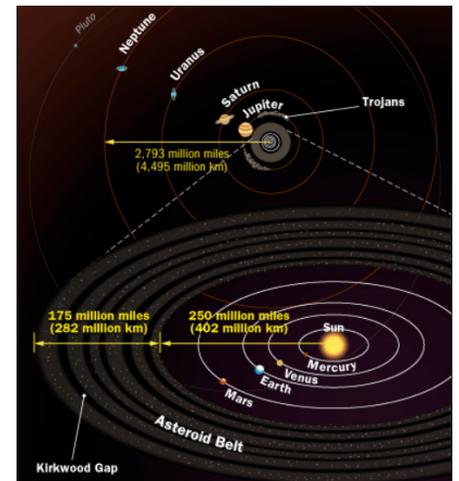
January, 2019

February Meeting

The Milwaukee Astronomical Society will hold its next Membership Meeting on Friday, **February 15th at 8 PM** at the Observatory. **Tamas Kriska** will give a presentation entitled **The Gravitational Effects of Planets**.

The meeting will be preceded by a Board Meeting which is open to the membership and starts at 7 PM. 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.



Inside this

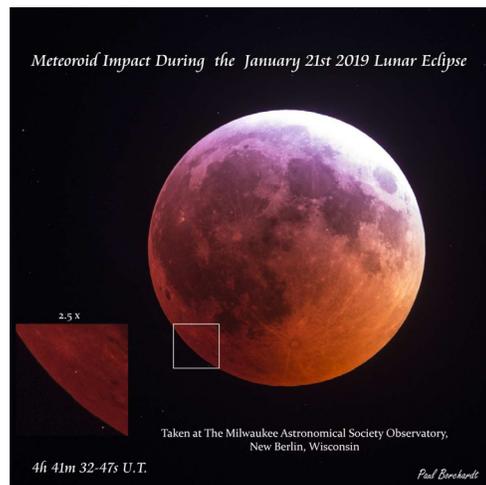
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Program Chair Wanted

The position of the Program Chair has been vacant for a long time, however, the monthly presentations are very popular. Therefore, we are looking for a member to fill this position. The duty is finding and arranging speakers for our monthly Membership Meetings from January through May and after the summer break from September through November.

If you are interested please contact Tamas Kriska (tkriska@mcw.edu) to receive a much detailed description and all the help you might need to get started.

Total Lunar Eclipse



On Sunday, January 20th we enjoyed the last total lunar eclipse of the decade. On a bitterly cold night 16 MAS members gathered at the Observatory to admire the eclipsing Moon. Some by naked eye, some through telescope and imaging. Mike Bauer made a hand drawn chart of the event. We were having a lot of fun. The heated Quonset, and hot chocolate/coffee/apple cider served by Steve Volp were a real life saver in the subzero temperatures.

Images taken by members are displayed on page 5.

As a bonus, Paul Borchardt was lucky enough to capture a meteor impact that occurred during the eclipse.

Observatory Report

The recently donated 8" Meade LX telescope and tripod was sold to MAS member Carlos Garces for \$110, which will be added to the new equipment fund. \$50 was also added to the fund from selling astrophotos at the Christmas party.

The items on the fire inspection that needed attention have been taken care of. There is now a cover on the electrical panel in A-building, luminated exit signs over both doorways to the Quonset Building, and all the fire extinguishers have been hung on walls.

G-scope is operational. Recently replaced camera filter wheel cable (was damaged). Scott Berg graciously donated a projector screen that is now hanging in the dome. Simple use of the dome lights seems to be enough to take flat frames consistently. G-scope has had several nights of testing with excellent guiding and it is believed the guiding troubles we faced with the AP900 have now been resolved. Minor work remains to collimate the scope, thoroughly clean the optics, and determine more precisely the center of mount rotation relative to the dome so as to improve the scope/slit pointing accuracy. Long-term, it will likely be a good idea to have the main camera professionally serviced by SBIG as it has been in use for several years now.

to be continued on page 3.

Treasurer's Report

\$5,109.09	Starting Balance as of 11/14/2018
	Expenditures
\$32.88	PayPal fees
\$633.86	Calendar & Christmas
\$357.98	Periodic expenses
\$519.15	Observatory expenses
\$36.00	Water/Sewer
\$149.29	WE Energies
\$1,729.16	TOTAL Expenditures
	Revenue
\$50.00	Private donations
\$159.00	Christmas donation
\$2160.00	Membership dues
\$100.00	Public donations
-\$10.00	Key deposit
\$1025.00	Equipment sale
\$3,484.00	TOTAL Revenue
\$6,863.93	Ending Balance as of 1/16/2019

Respectfully submitted,
Sue Timlin, Treasurer

Meeting Minutes

The meeting was held on January 18th at the MAS Observatory, New Berlin and was called to order at 7:07PM by the President, Tamas Kriska.

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

Membership Committee Report submitted by Jeff Kraehnke Committee Chair was approved. Applications of Paul Brammeier, Colleen Jeske & family, Jim Faust, Derek Brammeier & family, Andrew Swenson, Tiffany Larson, Thomas Fitzpatrick, Skip Deerr, and Logan Danks & family were approved.

Old Business – *Equipment shuffle*: After a short discussion on the Observatory Committee's recommendation a motion was made and carried to purchase a Stellarvue SVQ 100 astrograph and a ZWO ASI 1600 PRO CMOS camera with filter wheel and narrow band & RGB filters. Gene Hanson's donation and the income from selling the old C14 scope and Hyperstar will offset the price. *Fire Department inspection*: A metal door was installed to the breaker box. The photoluminescent exit signs were replaced.

New Business – *G-scope camera*: SBIG will be contacted for cleaning servicing the six year old STT-8300 camera and filter wheel.

Program – Jeff Kraehnke gave a presentation entitled The Mars Missions.



Respectfully submitted
Agnes Keszler, Secretary

Membership Report

Since the last Report we have received 12 new membership applications, 33 renewals and 60 memberships expired. We welcome Katie Scoenung & family, Jessica Schultz & family, Paul Brammeier, Colleen Jeske & family, Jim Faust, Derek Brammeier & family, Andrew Swenson, Tiffany Larson, Thomas Fitzpatrick, Skip Deerr, Kenneth Jones, and Logan Danks & family. The total number of active members is 139.

to be continued on page 3.

Observatory Report

(continued from page 2)

During several nights of testing the old G-scope mount continued to perform well using Jeff Kraehnke's personal SV130 refractor setup. Communication to the mount and other accessories has been flawless. The guiding issues that were evident when used with G-scope still occasionally occur but with much less amplitude and essentially are insignificant using a lighter and wider field setup. In the event the Board accepts a proposal to go with a 100 mm refractor setup, this will be even less significant of a concern. It is believed that repurposing this mount for a light-weight refractor is reasonable to resolve the issue of an underutilized F-shed and previously F-scope now decommissioned.

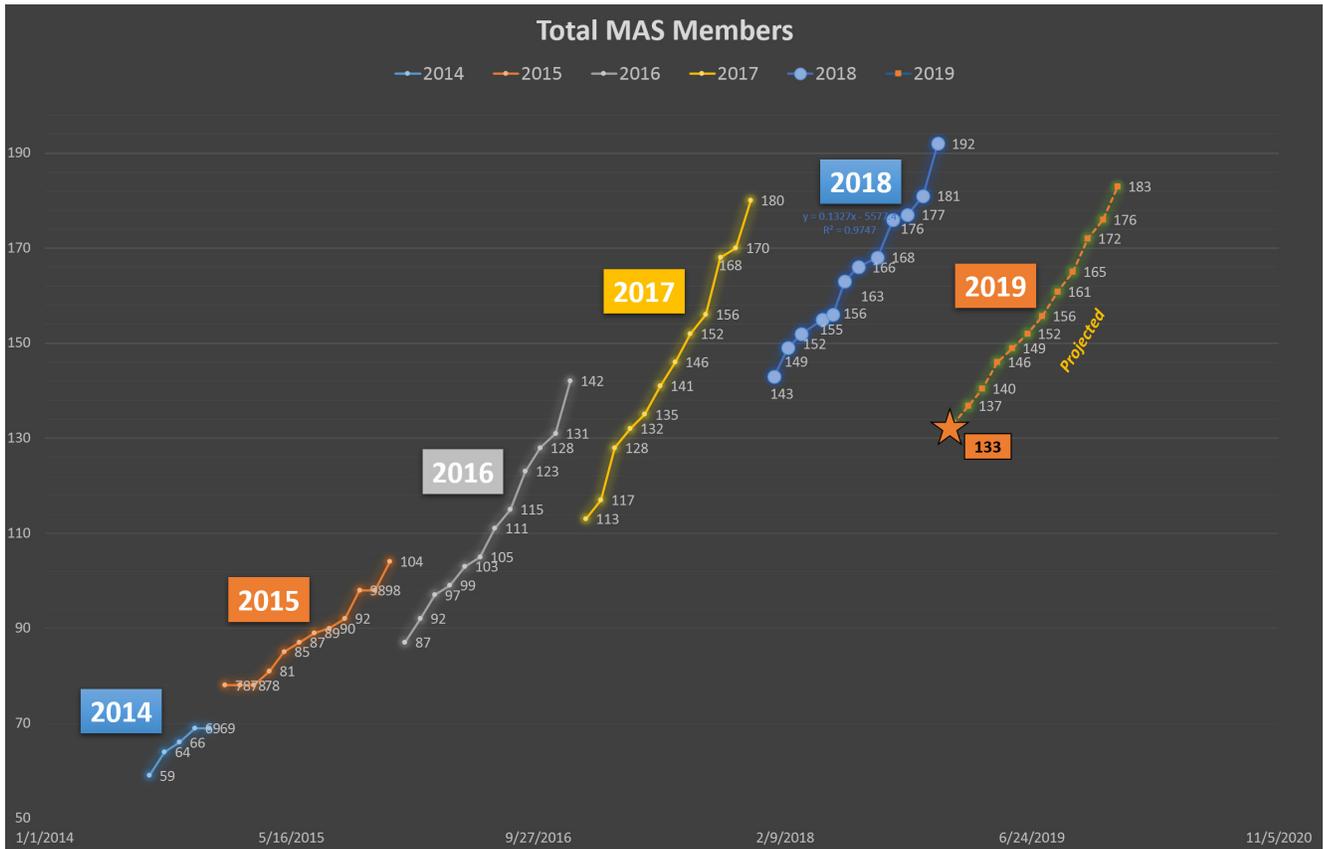
Members have replaced the 8-inch Celestron in Zit Observatory with the 10-inch Meade f/6.3 that was in storage and previously was in the Toeller observatory (2-3 yrs ago now). This move brings a better visual observing experience (more aperture

and faster scope on a superior mount) that can also be used for beginner astrophotography (prime focus) as well as piggy-back imaging (e.g. DSLR). So far feedback from members has been positive and has seemed to re-energize enthusiasm around the Zit Observatory. As a result of this move, the 8-inch Celestron with mount and tripod adds to the club's "Loaner" scopes available to members with proper training/experience. Short-term needs still include a dew shield and dew heating system TBD as well as a mount hand control extension, (it's too short currently). Long-term there are additional enhancements to make such as adding electric outlet on the pier, carpet, and upgrading the used rack and pinion focuser.

Images of the old Z-Dome ladder have now been taken and will be sold on Craigslist soon. In process of researching an appropriate price

Respectfully submitted,
Paul Borchardt, Observatory Director

Membership Report



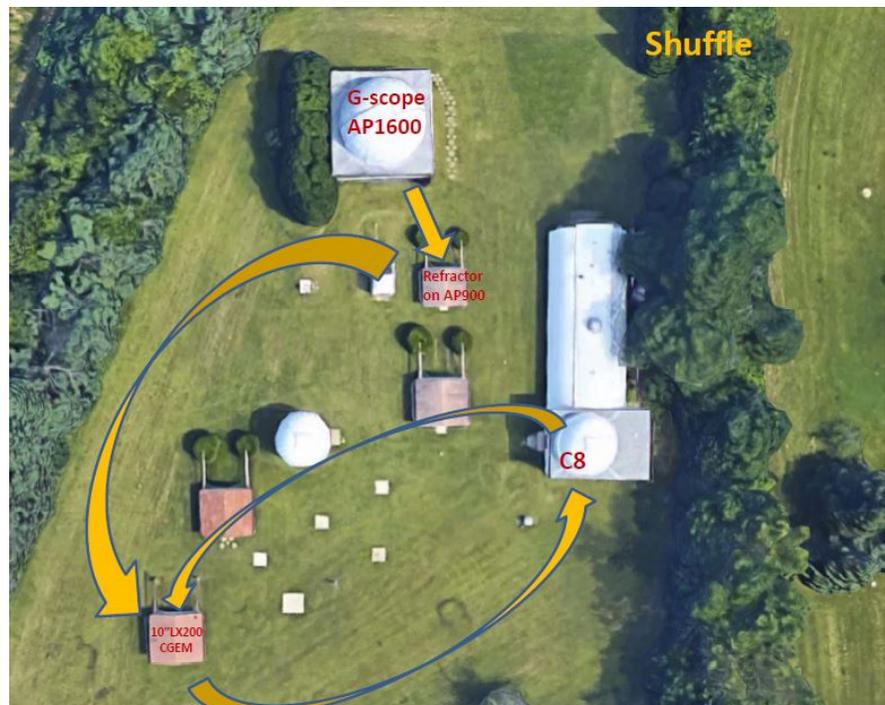
The number of new memberships by year has returned to "normal" following the Solar Eclipse of 2017. However, the "first year" membership renewals have declined steadily over the past years.

Submitted,
Jeff Kraehnke, Committee Chair

Equipment Shuffle

To address the issues of underutilized equipment, lack of advanced imaging systems, limited Moon tracking capability, and lack of loaner scopes, the Board of Directors decided to rearrange some of the existing equipment, sell all unused parts, and invest in a Stellarvue SVQ100 F/5.8 Quadruplet Astrograph equipped with a ZWO ASI 1600 PRO CMOS camera with a filter wheel and a set of narrow band and RGB filters. Gene Hanson's generous donation of \$4000, along with selling the old F-scope parts covered all expenses.

According to the new arrangement the Toeller Observatory will house the new refractor on the AP900 mount (formerly on G-scope), while the 10" LX 200 scope mounted on old F-scope's CGEM will replace the 8" Celestron Edge in the Zit Observatory. The 8" Celestron will serve as loaner scope and/or pole mounted auxiliary telescope on public events.



Total Lunar Eclipse

Below is a collection of images taken by members on January 20th from the Observatory or elsewhere.



Shariff Attaya



Arun Hedge



Jeff Kraehnke



John Asztalos



Gabe Shaughnessey



Carlos Garces



Paul Borchardt



Chad Andrist

In the Astronomical News

Cosmic Collision Billions of Years off Could Fling Earth out of Milky Way

Day to day here on Earth, our biggest threat from space is probably some undetected asteroid smashing into us, but astrophysicists looking at the universe on a much larger scale warn that another kind of collision could also impact our planet in the distant future.

A team led by researchers from the UK's Durham University says the threat of another galaxy colliding with the Milky Way could happen much sooner than previously thought and might send our entire solar system hurtling off in a new direction.

"There is a small chance that we might not escape unscathed from the collision between the two galaxies which could knock us out of the Milky Way and into interstellar

space," Marius Cautun, a postdoctoral fellow at Durham's Institute for Computational Cosmology, said in a statement.

Fortunately for us, and probably for everything and everyone we'll ever know, this collision between the Milky Way and the smaller galaxy known as the Large Magellanic Cloud (LMC) probably won't happen for 2 billion years. But that's still much sooner than the previously predicted impact with our neighboring Andromeda galaxy set to happen in 8 billion years.

"While 2 billion years is an extremely long time compared to a human lifetime, it is a very short time on cosmic timescales," Cautun said.

The LMC is one of a group of smaller satellite galaxies that actually orbit the Milky Way. New calculations suggest it has twice as much dark matter as previously thought and that all that previously undetected mass could mean it's slowing down and will be unable to escape the gravitational pull of the Milky Way.

The scientists say the collision could also wake up the Milky Way's dormant black hole, which would immediately begin

to feed on nearby gas and grow in size by an order of magnitude.

"Barring any disasters, like a major disturbance to the solar system, our descendants, if any, are in for a treat: a spectacular display of cosmic



Large Magellanic Cloud Credit: Josh Barrington ESA/NASA/Hubble

fireworks as the newly awakened supermassive black hole at the center of our galaxy reacts by emitting jets of extremely bright energetic radiation," said Durham professor Carlos Frenk.

Fortunately, that garish galactic gala will be far enough away that it's unlikely to affect life on Earth. Of course, as Frenk points out, we might not be around to see it if the initial collision flings us beyond the bounds of the Milky Way.

by Eric Mack cnet.com

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

At Your Service

Officers / Staff

President	Tamas Kriska	414-581-3623
Vice President	Sue Timlin	414-460-4886
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
Scott Berg	262-893-7268
Russ Blankenburg	262-938-0752
Clark Brizendine	414-305-2605
Jason Doyle	414-678-9110
John Hammetter	414-519-1958
Lee Keith	414-425-2331
Jeff Kraehnke	414-333-4656
Jim Schroeter	414-333-3679
Sue Timlin	414-460-4886
Steve Volp	414-751-8334

February Keyholders

02/02	Russ Blankenburg	262-938-0752
02/09	Paul Borchardt	262-781-0169
02/16	Brian Ganiere	414-961-8745
02/23	Steve Volp	414-751-8334



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