

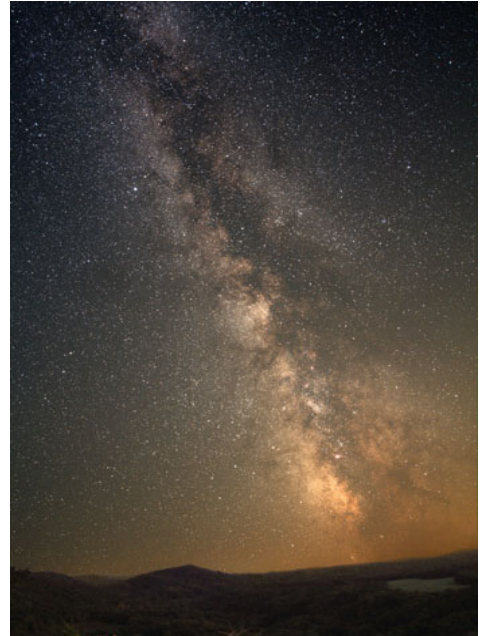


Membership Meeting on October 16th

The next Membership Meeting will be on October 16th at 8:00PM at the Observatory. Tamas Kriska will give a presentation about the widefield astrophotography. The main focus will be on imaging the Milky Way. The talk will include an overview of necessary equipment, strategies and image pre- and post-processing. The image on the right will also be discussed.

Other members are welcome to join the conversation and display some of their works and sharing technical details.

The meeting will be preceded by the Board Meeting starting from 7:00PM. It is open to anybody who is interested.



Inside this issue:

Membership Meeting	1
New Observatory	1
Renewal	1
Membership	2
Treasurer Report	2
Observatory Director's Report	2
Observatory News	3
Observatory News	4
Public Nights	5
In the News	6
Adopt a Scope	7
Officers/Staff	7
Keyholders	7

The New Toeller Observatory



On October 4th, after five consecutive weekends of construction work the renewed Toeller Observatory was finished. Now we have the job of installing the pier and mounting the scope. Thanks to everyone who helped in this project. In the article on page 3-4 you will find photos documenting all the phases of the construction. First light in the next issue.

MAS Membership Renewal

We still need to hear from many more members. Please, if you have not done it yet, take a little time and renew your membership. Several options are available: online by following this link: www.milwaukeeastro.org/renew. Print out the form and send it back along with a check made payable to The Milwaukee Astronomical Society. If you joined the Club after January 1st, 2015 do not take any action, your membership is active till the next renewal period.

Observatory Report

Great progress has been on the new Toeller Observatory, headed by Jeff Kraehnke. The old structure was demolished and was returned to Gerry Samolyk who had donated it. He will be setting it up in his backyard so we know he will make good use of it. We hand dug the new concrete base and pier foundation, and poured the concrete.

I purchased both a new projection screen and a whiteboard for our Quonset meeting room. The old screen was grey and it no longer could be retracted. The time for the whiteboard was long overdue.

We had a very successful Scout tour of the Observatory on August 20th with clear skies so we had a lot of viewing. We have another scheduled on September 20th. finally, on August 21st we had our first clear night for open house season, and it was partially clear for the September 11th.

Finally, I received 3 applications for full keys by Sue Timlin, Jeff Kraehnke, and Frank Kenney. All 3 have been checked out so it is my recommendation that they be approved by the Board.

Respectfully Submitted,
Gene Hanson, Observatory Director

Treasurer's Report

\$1,042.88	Ending Balance as of 8/5/2015
	<u>Expenditures</u>
\$70.4	WE Energies
\$14.87	PayPal Fees
\$49.48	Picnic Refreshment
\$1,600.00	New Observatory
\$240.72	Office Supplies, Lights
-\$1,975.21	TOTAL Expenditures
	<u>Revenue</u>
\$80.00	Donation Payne, Bonow
\$465.00	Tours, Public Donation
\$1,150.00	Membership Dues
\$4,000.00	Protective Deposit
\$5,695.00	TOTAL Revenue
\$4,762.67	Ending Balance as of 9/16/2015

Respectfully Submitted,
Dennis Roscoe, Treasurer

Meeting Minutes

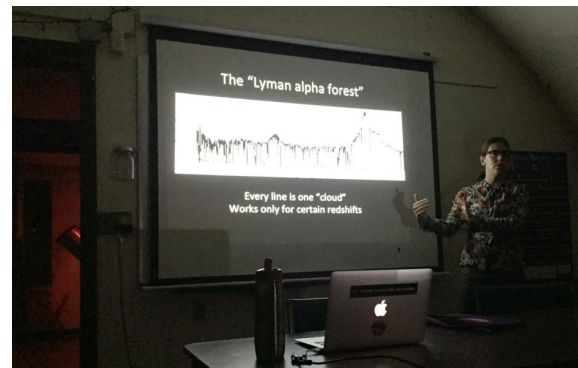
Held on September 18th at the MAS Observatory, New Berlin. The meeting was called to order at 8:05 PM by Vice President, Sue Timlin.

Minutes of the previous meeting, **Treasurer's Report**, **Observatory Director's Report**, and the **Membership Report** were submitted electronically in advance (see this page), therefore were not read.

Old Business - Dennis Roscoe talked about the revised MAS insurance policy. We have a discount and an increased coverage to be finalized in the next quarterly statement. Jeff Kraehnke gave a progress report on the rebuilding of the Toeller Observatory. Sue gave an update on the Astronomical League membership. MAS has 9 members, among them 6 newly joined. Dennis suggested to use lights in the parking lot on other events not just public nights.

New Business - New members Violet and Jarred Thede were welcomed. The vacancy in the Board was filled by Paul Borchardt.

The Program - Astrid Lamberts, Postdoctoral Fellow at Center of Gravitation, Cosmology, and Astrophysics at the Physics Department of UW Milwaukee gave a presentation entitled "Playing hide-and-seek with the intergalactic medium".



The meeting was adjourned at 9:10 PM.

Respectfully Submitted,
Agnes Keszler, Secretary

Membership Report

Since the August Report we received 4 new applications, 1 was withdrawn, 2 were paid, and 1 is awaiting payment. We now have 92 members. We have started the renewal process., and have 25 renewals so far. Like last year, Gene Hanson is assisting in sending out personal emails for the renewal process.

Respectfully Submitted,
Tamas Kriska, Committee Chair

Observatory News

Rebuilding the Toeller Observatory

The weather in September was very nice, so we could make substantial progress on every weekend.



The very first phase of pouring the concrete floor and pier was reported earlier in the September issue of this Newsletter.

Building trusses for the roof turned out to be one of the most difficult and time consuming tasks.



Immediately after I-beam installation trees were planted to reduce the risk of accidents.

Sometimes we had to race against time to get the job done before it got completely dark.



Observatory News

Rebuilding the Toeller Observatory

On the fifth weekend when our team finished putting the siding on, the weather turned cold and breezy. After all it was already October.



be handy to put small objects like laptops and camera bags on.



Although the conditions were less than ideal we managed to paint the walls and lay a carpet on the concrete floor. The electric wires were also installed. The new observatory is ready for the F-scope.



We installed shelves to both corners by the door. They will strengthen the wall, and also will

A big **THANK YOU!** goes to everybody who participated in this project:



- Paul Borchardt
- Gene Hanson
- Scott Jamieson
- Lee Keith
- Frank Kenney
- Jeff Kraehnke
- Agnes Keszler
- Tamas Kriska
- Herman Restrepo
- Mike Smiley
- Steve Volp

Public Nights

Total Lunar Eclipse

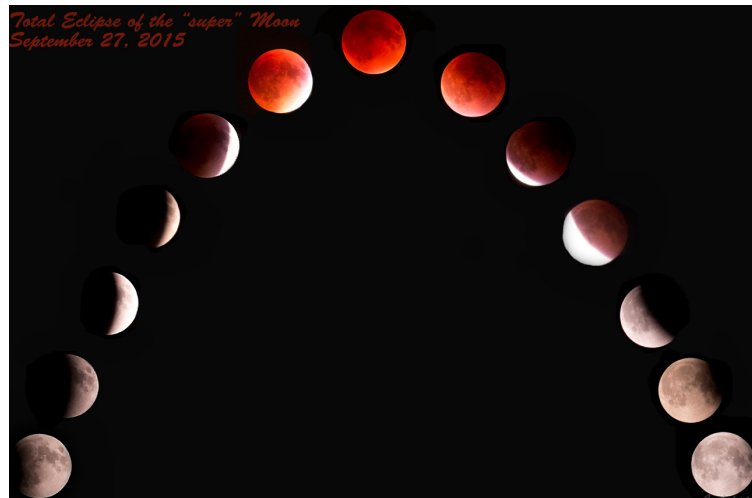
On September 27th the Moon was in perigee, when it appears 14 percent larger and 30 percent brighter than in apogee. Simultaneously a total lunar eclipse occurred, a rare event that last happened more than 30 years ago. The event attracted a huge crowd to our special Public Night. We may have had over 200 visitors. The weather forecast looked bleak, but at the last moment the clouds moved away.

Herman Restrepo gave his talk twice, each time for a full Quonset.

Many members were imaging the event. Steve Volp made a timelapse video that you can watch on our YouTube channel at: <https://youtu.be/2l-GbZx-m90>



Set of photos Paul Borchardt took at the MAS Observatory with a 800 mm F8 telephoto mounted on A scope.



Chad Andrist shot these pictures from his backyard with a Canon 60D camera with the 18-200 mm IS kit lens.

Last Public Night



On Friday, October 9th we had our last Public Night of the season. The sky was clear, a very unusual situation in 2015 (out of eight public nights five were cloudy if not rainy). Sue Timlin gave an introductory presentation about the objects that can be seen early fall. Then the guests had a chance to observe those objects through various telescopes. Visitors specifically enjoyed comparing the G-scope images with those seen in eyepieces.

In the Astronomical News

Pluto's Big Moon Charon Reveals a Colorful and Violent History

At half the diameter of Pluto, Charon is the largest satellite relative to its planet in the solar system. Many New Horizons scientists expected Charon to be a monotonous, crater-battered world; instead, they're finding a landscape covered with mountains, canyons, landslides, surface-color variations and more.

"We thought the probability of seeing such interesting features on this satellite of a world at the far edge of our solar system was low," said Ross Beyer, an affiliate of the New Horizons Geology, Geophysics and Imaging (GGI) team from the SETI Institute and NASA Ames Research Center in Mountain View, California, "but I couldn't be more delighted with what we see." High-resolution images of the Pluto-facing hemisphere of Charon, taken by New Horizons as the spacecraft sped through the Pluto system on July 14 and transmitted to Earth on Sept. 21, reveal details of a belt of fractures and canyons just north of the moon's equator. This great canyon system stretches more than 1,000 miles (1,600 kilometers) across the entire face of Charon and likely around onto Charon's far side. Four times as long as the Grand Canyon, and twice as deep in places, these faults and canyons indicate a titanic geological upheaval in Charon's past.

"It looks like the entire crust of Charon has been split open," said John Spencer, deputy lead for GGI at the Southwest Research Institute in Boulder, Colorado. "With respect to its size relative to Charon, this feature is much like the

vast Valles Marineris canyon system on Mars.

"The team has also discovered that the plains south of the Charon's canyon -- informally referred to as Vulcan Planum -- have fewer large craters than the regions to the north, indicating that they are noticeably younger. The smoothness of the plains, as well as their grooves and faint ridges, are clear signs of wide-scale resurfacing. One possibility for the smooth surface is a kind of

cold volcanic activity, called cryovolcanism. "The team is discussing the possibility that an internal water ocean could have frozen long ago, and the resulting volume change could have led to Charon cracking open, allowing water-based lavas to reach the surface at that time," said Paul Schenk, a New Horizons team member from the Lunar and Planetary Institute in Houston.

Even higher-resolution Charon images and composition data are still to come as New Horizons transmits data, stored on its digital recorders, over the next year -- and as that happens, "I predict Charon's story will become even more

amazing!" said mission Project Scientist Hal Weaver, of the Johns Hopkins University Applied Physics Laboratory in Laurel, Maryland.

The New Horizons spacecraft is currently 3.1 billion miles (5 billion kilometers) from Earth, with all systems healthy and operating normally.

from the New Horizons website



Charon in Enhanced Color NASA's New Horizons captured this high-resolution enhanced color view of Charon just before closest approach on July 14, 2015. The image combines blue, red and infrared images taken by the spacecraft's Ralph/Multispectral Visual Imaging Camera (MVIC); the colors are processed to best highlight the variation of surface properties across Charon. Charon's color palette is not as diverse as Pluto's; most striking is the reddish north (top) polar region, informally named Mordor Macula. Charon is 754 miles (1,214 kilometers) across; this image resolves details as small as 1.8 miles (2.9 kilometers). Credits: NASA/JHUAPL/SwRI

Adopt a Telescope Program - Signup Sheet

	Adoptee	Scope	Location
1	Sue Timlin	18" F/4.5 Obsession	Wiesen Observatory
2	Neil Simmons	12.5" F/7.4 Buckstaff	B Dome
3	Russell Chabot	12.5" F/9 Halbach	A Dome (Armfield)
4	Dan Yanko	18" F/4.5 Obsession (Kyle Baron)	Albrecht Observatory
5	Tamas Kriska	14" F/11 Celestron	Z Dome
6	Henry Gerner	12" LX 200	Tangney Observatory
7	Vacant	8" Celestron	Ray Zit Observatory
8	Vacant	14" F/2 Celestron	Jim Toeller Observatory

At Your Service

Officers / Staff

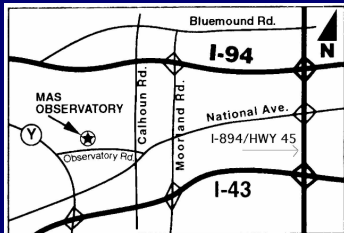
President	Vacant	
Vice President	Sue Timlin	414-460-4886
Treasurer	Dennis Roscoe	608-206-0909
Secretary	Agnes Keszler	414-581-7031
Observatory Director	Gene Hanson	262-354-0138
Asst. Observatory Director	Jill Roberts	414-587-9422
Asst. Observatory Director	Jeff Kraehnke	414-333-4656
Newsletter Editor	Tamas Kriska	414-581-3623
Webmaster	Robert Burgess	920-559-7472

Board of Directors

Paul Borchardt	262-781-0169
Robert Burgess	920-559-7472
Russell Chabot	414-881-3822
John Hammetter	414-519-1958
Gene Hanson	262-354-0138
Lee Keith	414-425-2331
Frank Kenney	414-510-3507
Agnes Keszler	414-581-7031
Jeff Kraehnke	414-333-4656
Tamas Kriska	414-581-3623
Sue Timlin	414-460-4886

October/November Keyholders

10/17	Gene Hanson	262-354-0138
10/24	Frank Kenney	414-510-3507
10/31	Paul Borchardt	262-781-0169
11/7	Jeff Kraehnke	414-333-4656
11/14	Jill Roberts	414-587-9422
11/21	Tim Hoff	262-662-2212



MAS Observatory

18850 Observatory Rd
New Berlin, WI

www.milwaukeeastro.org