MILWAUKEE ASTRONOMICAL SOCIETY

FOCAL POINT

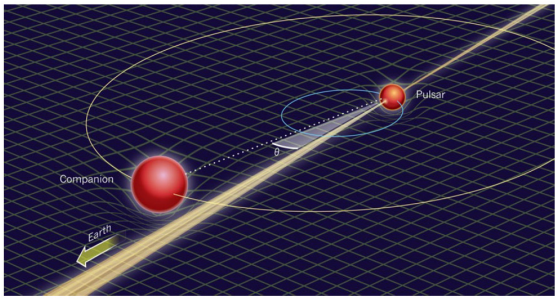
February, 2016

February 19th: Membership Meeting at Retzer Nature Center

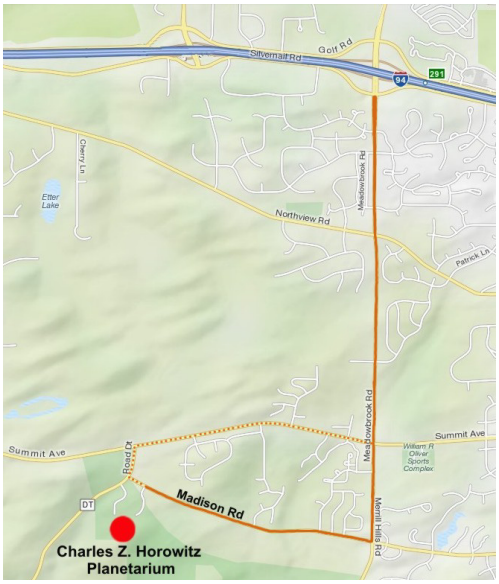
The upcoming General Membership Meeting of the MAS is going to be held on February 19th, at 8:00 PM at the Retzer Nature Center, which is located at S14 W28167 Madison St. Waukesha, WI 53188 (see the map below).

The guest speaker will be Sarah J Vigeland, a postdoctoral researcher at the Center for Gravitation, Cosmology, and Astrophysics at the University of Wisconsin — Milwaukee. Sarah's talk is entitled: "The Strange Case of PSR J1640+2224: Combining Radio and Optical Observations to Study Pulsar/White Dwarf Binaries". Millisecond pulsars are powerful tools for studying astrophysics and gravity. In her talk, she will discuss how we can use radio and optical observations to understand pulsar/white dwarf binaries, focusing on a particularly puzzling system, PSR J1640+2224. Sarah will talk about how we use pulsar timing observations and optical observations of the companion to study this system, and what this tells us about fundamental astrophysics.

The Strange Case of PSR J1640+2224



Inside this issue:



The MAS Winter Schedule

The winter meetings from January through April will be held in the lecture room of the Retzer Nature Center, S14 W28167 Madison St in Waukesha. Starting from May the meetings will return to the MAS Observatory.

Directions to Charles Z. Horwitz Planetarium: take I-94 West to Pewaukee/ Waukesha (exit 291) and go south on Meadowbrook Rd. Turn right onto Madison Rd. The driveway to the planetarium will be on the left side of the road (see solid line on the map). Alternatively, turn right onto Hwy. 18 (Summit Ave), turn left onto Hwy DT and follow the signs to Retzer Nature Center (dotted line on the map).

Observatory Report

Winter has officially arrived so activity at the observatory has slowed. But thanks to the plowing by Paul Borchardt, we have good access to the parking lot.

The Board accepted the $800 quote from Dan's Tree and Landscaping to cut down, chip, and haul away 4 pine trees and prune locust limbs overhanging the quonset building.

We continue to see great results from the G-Scope and the F-Scope.

Website: We placed two new forms on the website in order to better accommodate gift memberships to the club: an additional web application form and another PDF form.

The member database has been expanded to help out in the renewal process, generating email lists, and tracking membership activity. Also, we have established a member class between Active and Inactive called Pending.

Steve Volp has put in code to help the search engines better scan our site by installing a bots.txt and sitemap file in each of our public directories.

Respectfully Submitted,
Gene Hanson, Observatory Director

Treasurer's Report

$1,632.56	***Ending Balance as of 11/18/2015***
	Expenditures
$155.55	WE Energies
$18.81	PayPal Fees
$100.00	Brinson stipend
$511.00	Foremost Insurance
$160.00	New Berlin Taxes
$100.00	TSX subscription
-$1,052.86	TOTAL Expenditures
	Revenue
$67.01	Money Market deposit
$136.00	Xmas Donations
$677.00	Membership Dues
$880.01	TOTAL Revenue
$1,459.71	***Ending Balance as of 1/13/2016***

Respectfully Submitted,
Dennis Roscoe, Treasurer

Meeting Minutes

Held on January 15th at the Charles Z. Horwitz Planetarium, Retzer Nature Center, Waukesha. The meeting was called to order at 8:10 PM by President, Tamas Kriska.

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

Old Business - The computer of the 12" LX200 was re-located to the front office.

The trees were not cut, Rob Burgess will follow up with the company.

New Business - Sue Timlin was elected as the new Treasurer.

Virgil Tangney was elected as an Honorary Member recognizing his decades long dedicated work for MAS.

A plan was proposed to build a dedicated Solar Observatory. A Lunt LS80THa double-stacked telescope will be housed in a SkyShed POD next to the Tangney observatory. The Board voted to set aside $10,000 for this project (see the article on p 3).

A major remodeling of the Quonset Hut was also proposed. The discussion will be continued during the February meeting.

The Program - David DeRemer Planetarium Director gave a tour of the sky followed by a planetarium show entitled "Chasing the ghost particles".

The meeting was adjourned at 8:55 PM.

Respectfully Submitted,
Agnes Keszler, Secretary

Membership Report

A corrected active member number from the January report is 87.

Since the January Report 3 members renewed their membership. We also received 3 new membership applications and would like to welcome Simon Vancina and Shawn Drulia. The third application is still pending. We now have 92 active members.

Respectfully Submitted,
Jeff Kraehnke, Committee Chair

Observatory News

A Dedicated Solar Observatory Project

During the January Meeting the Board of Directors discussed the proposal to build a dedicated solar observatory around the pier in front of the Z-dome (red circled area on the areal view below) that is currently vacant.

The proposal includes a purchase of a Lunt LS80THa double-stacked refractor telescope with an aperture of 80mm and focal length of 560 mm (f/7). An internal pressure-tuned double-stacking module to a Lunt LS80THa will allow a lowered bandpass of <0.5 Angstroms. For more information on the telescope go to the www.luntsolarsystems.com

It will be housed in a SkyShed POD observatory that made of High Density Polyethylene and expanded with a bay that serves as a storage room. For more information on the telescope go to the www.skyshedpod.com

The proposal was unanimously accepted by the Board. The custom made components were ordered and are in production. The concrete pad around the pier will be poured as soon as the warmer weather arrives. Work parties will be announced on the Google Group.

The project is coordinated by Paul Borchardt.

Membership News

Honorary Member Certificate

To be known that, in recognition of his long time service

Virgil Tangney

was elected Honorary Member of the

Milwaukee Astronomical Society

The membership was granted on January 15, 2016

Board of Directors

As a recognition of his more than five decade long dedicated work for the Club, the Board of Directors elected Virgil Tangney as Honorary Member of the Milwaukee Astronomical Society during the January Board Meeting.

Virgil joined the MAS in 1964. Three years later he was elected to the Board where he served seven terms (in 1967, 1970, 1977, 1982, 1987, 1999, 2009). He was also elected twice as Vice President (1970, and 1974), and was a President of the Club in 1975. He held the position of Assistant Observatory Director between 1972 and 1975. He also chaired standing committees (Open House in 1964, and Program in 1974).

In July of 2001 the observatory that is housing the 12" Meade LX 200 was officially named Tangney Observatory to honor Virgil and MaryAnn Tangney's dedicated work and contributions over the years (see photo on the left).

Virgil remained an active member until he moved to Florida in 2010. Even after moving he has co-edited the Focal Point Newsletter for several months.

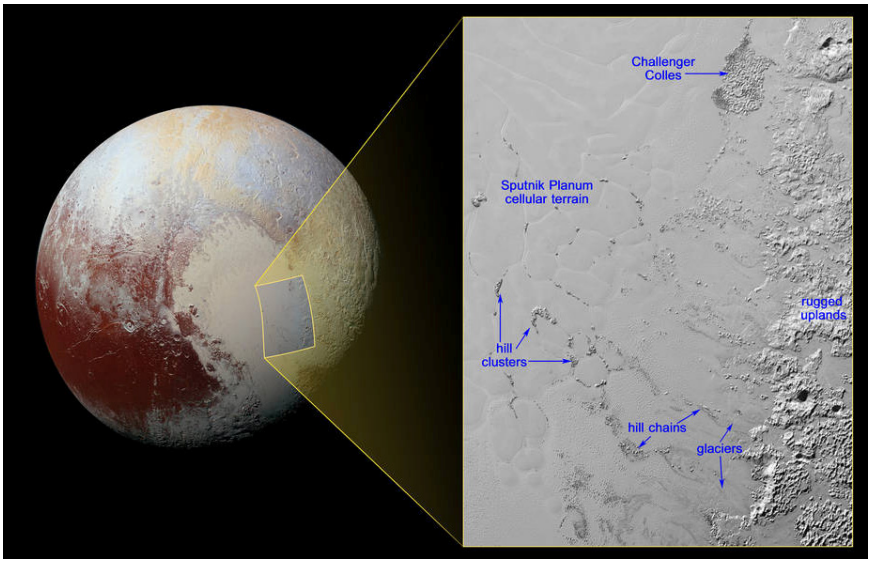
When visiting Milwaukee during summer, Virgil always participate in the annual MAS picnics where he shares old stories with friends, and keeps track of the Club's new developments.

In the Astronomical News

Pluto's Mysterious, Floating Hills

The nitrogen ice glaciers on Pluto appear to carry an intriguing cargo: numerous, isolated hills that may be fragments of water ice from Pluto's surrounding uplands. These hills individually measure one to several miles or kilometers across, according to images and data from NASA's New Horizons mission.

The hills, which are in the vast ice plain informally named Sputnik Planum within Pluto's 'heart,' are likely miniature versions of the larger, jumbled mountains on Sputnik Planum's western border. They are yet another example of Pluto's fascinating and abundant geological activity.



Hills of water ice on Pluto 'float' in a sea of frozen nitrogen. They're thought to move slowly over time, somewhat like icebergs in Earth's Arctic Ocean. For the scale here, notice the feature informally named Challenger Colles – honoring the crew of the lost Space Shuttle Challenger. It appears to be an especially large accumulation of these hills, measuring 37 by 22 miles . Image via NASA/JHUAPL/SwRI.

Because water ice is less dense than nitrogen-dominated ice, scientists believe these water ice hills are floating in a sea of frozen nitrogen and move over time like icebergs in Earth's Arctic Ocean. The hills are likely fragments of the rugged uplands that have broken away and are being carried by the nitrogen glaciers into Sputnik Planum. 'Chains' of the drifting hills are formed along the flow paths of the glaciers. When the hills enter the cellular terrain of central Sputnik Planum, they become subject to the convective motions of the nitrogen ice, and are pushed to the edges of the cells, where the hills cluster in groups reaching up to 12 miles (20 kilometers) across.

At the northern end of the image, the feature informally named Challenger Colles – honoring the crew of the lost space shuttle Challenger – appears to be an especially large accumulation of these hills, measuring 37 by 22 miles (60 by 35 kilometers). This feature is located near the boundary with the uplands, away from the cellular terrain, and may represent a location where hills have been 'beached' due to the nitrogen ice being especially shallow.

The image shows the inset in context next to a larger view that covers most of Pluto's encounter hemisphere. The inset was obtained by New Horizons' Multispectral Visible Imaging Camera (MVIC) instrument. North is up; illumination is from the top-left of the image. The image resolution is about 1050 feet (320 meters) per pixel. The image measures a little over 300 miles (almost 500 kilometers) long and about 210 miles (340 kilometers) wide. It was obtained at a range of approximately 9,950 miles (16,000 kilometers) from Pluto, about 12 minutes before New Horizons' closest approach to Pluto on July 14, 2015.

by NASA Headquarters, Washington, D.C., Johns Hopkins University Applied Physics Lab, Laurel, Maryland, Southwest Research Institute, San Antonio, Texas

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/7.4 G-scope	Z Dome
6	Henry Gerner	12" F/10 LX200 EMC	Tangney Observatory
7	Vacant	8" F/11 Celestron EdgeHD	Ray Zit Observatory
8	Vacant	14" F/1.9 F-scope	Jim Toeller Observatory

At Your Service

Officers / Staff

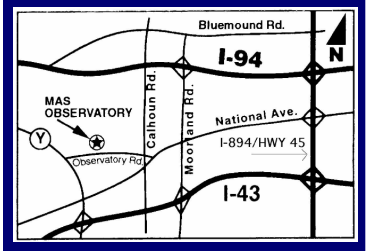
President	Tamas Kriska	414-581-3623
Vice President	Sue Timlin	414-460-4886
Treasurer	Sue Timlin	414-460-4886
Secretary	Agnes Keszler	414-581-7031
Observatory Director	Gene Hanson	262-269-9576
Asst. Observatory Director	Jill Roberts	414-587-9422
Asst. Observatory Director	Jeff Kraehnke	414-333-4656
Newsletter 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	262-269-9576
Lee Keith	414-425-2331
Frank Kenney	414-510-3507
Jeff Kraehnke	414-333-4656
Agnes Keszler	414-581-7031
Tamas Kriska	414-581-3623
Sue Timlin	414-460-4886

February/March Keyholders

2/13	Sue Timlin	414-460-4886
2/20	Jeff Kraehnke	414-333-4656
2/27	Lee Keith	414-425-2331
3/5	Frank Kenney	414-510-3507
3/12	Henry Gerner	414-774-9194
3/19	Tamas Kriska	414-581-3623
3/26	Mike Smiley	262-825-3981



MAS Observatory

18850 Observatory Rd
New Berlin, WI 53146

www.milwaukeeastro.org