



March Meetings

The next MAS meeting will be held on **Friday**, **March 20**th, from 7 PM at the Observatory. This is going to be a combined Board/Membership meeting. During the first hour (the official Board meeting) organizational and Observatory

related issues will be discussed. Every member is welcome to attend. During the second half, starting at 8 PM Lee Keith will present a show: "<u>Top 10 Space</u> <u>Things We Didn't Know When We Were In School</u>". Changes in Astronomy happened in past few decades will be discussed that would be surprising to people who don't keep up with it.

Our **First Wednesday** How To Meeting will be on March 4th from 7:30 thru 9:00 PM. The agenda is open, just show up and ask your any astronomy-, Observatory-, or telescope related question.

The **PixInsight Focus Group** will meet on Wednesday, March 11^{th} at 7 PM. The specific topic of the meeting will be announced on the Google Group.

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

2020 Public Night Schedule

The Board of Directors has finalized the dates for the 2020 Public Night Season based on suggestions from the Open House Committee.

Date	Hours	Topic
May l	7:30 - 10:30	
May 29	8:00 - 11:00	
June 20	1:00 - 4:00	The Sun
September 11	6:30 - 9:30	
October 9	6:00 - 9:00	
October 30	6:00 – 9:00	Halloween

All events will be on Friday, with exception of June 20th, which is a Saturday afternoon with the Sun as topic. According to our new tradition the theme of the October 30th night will be Halloween. Speakers of all other nights are free to chose their topic. Duplication of topics should be avoided. We already have volunteers for September and two October nights (Dennis Roscoe, Randy Culp, and Lee Keith, respectively), however speakers are still needed for May and June. If you

are interested in giving a 45-60 min talk, please contact Sue Timlin committee chair via the Google Group.

The kind help from Members would be appreciated during the nights. You can direct the traffic in the parking lot, give a tour of the Observatory, or man a telescope. The objects for each telescope will be assigned through printed maps, just like in the previous years.

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Observatory Director Report

Due to the bad weather over the last month, little has happened at the Observatory.

Clear nights have been very rare, and there's been no activity as far as maintenance.

On the good side, nothing has broken either. Hopefully March will be a better month for astronomy and with the warmer weather starting next month maybe there will be more activity on the hilltop. Due to only having the parking lot plowed this winter and not any plowing around the buildings, getting up to the Observatory has been harder. For myself, this has made it harder to get out and install the news solar finders on Aand B-scopes, and the finder for C-scope.

> Respectfully Submitted, Paul Borchardt, Observatory Director

Treasurer's Report

\$10,315.86	Starting Balance as of 01/15/2020	
	Expenditures	
\$15.74	PayPal fees	
\$10.00	Annual expenses	
\$129.27	WE Energies	
\$155.01	TOTAL Expenditures	
	<u>Revenue</u>	
\$714.00	Membership dues	
-\$2.00	Grants	
\$712.00	TOTAL Revenue	
\$10,872.85	Ending Balance as of 01/15/2020	

Respectfully Submitted, Sue Timlin, Treasurer

Membership Report

Since the last Report we received 4 renewals and 7 new applications. We welcome Scott Kneeland & Family, Bob & Genevieve Dickson, Christopher Johnson, Susan Johnson, Jim Armfield & Family, Connie Stenhjem, and David Lawson. The total number of active members is 157.

> Respectfully Submitted, Jeff Kraehnke, Committee Chair

Minutes

The meeting was held on February 17th at the MAS Observatory, New Berlin and was called to order at 7:03 PM by Tamas Kriska President.

Minutes, Treasurer's Report and Observatory Director's Report electronically submitted ahead the meeting were approved. Membership Committee Report submitted electronically ahead of the meeting was approved. Membership applications of Frank Wedel, Matt Ryno & Family, Clayton Clouse & Family, George Domanos & Family, Daniel J. Wolter, Scott Kneeland & Family, the Bob & Genevieve Dickson, Christopher Johnson, Susan Johnson, Jim Armfield & Family, and Connie Stenhjem were approved.

Old Business – *Venus filter*: A 1.25" Baader U-Venus-filter was ordered. *Snow plowing*: A quote will be asked to plow passes to the Quonset and the main Observatories. *Public Nights*: The Open House Committee submitted a revised suggestion for the Public Night dates and topics. Motion was made and carried to accept the proposal.

New Business – *Entrance gate*: Jeff Kraehnke contacted a local company and will keep looking at possibilities/quotes to install a sliding gate to replace the chain at the Observatory entrance.

Meeting day change: We may try to move the Meeting nights from Friday to a different weekday from September thru November to explore its effect on the meeting attendance.

Program – We watched a video of the 2011 Nobel Prize winner Brian Schmidt's talk entitled "The accelerating Universe" followed by discussion.



The meeting was adjourned at 9:10 PM. Respectfully Submitted, Agnes Keszler, Secretary

In the Astronomical News

Mysterious 'Wave' of Star-Forming Gas May Be the Largest Structure in the Galaxy

The newly discovered suburb of babybooming stars could change our map of the Milky Way, astronomers say.

Orion's belt may be more than just a waist of space.

According to new research the girdled constellation may also be a small piece of the single largest structure ever detected in the Milky Way galaxy — a swooping stream of gas and baby stars that astronomers have dubbed "the Radcliffe Wave."

Spanning about 9,000 light-years (or about 9% of the galaxy's diameter), the unbroken wave

of stars begins near Orion in a trough about 500 light-years below the Milky Way's disk. The wave swoops upward through the constellations of Taurus and Perseus, then finally crests near the constellation Cepheus. 500 light-years above the galaxy's middle. The entire undulating structure also stretches about 400 lightyears deep, includes some 800 million stars and is dense with ac-



while creating a 3D map of the Milky Way with data gathered largely by the European Space Agency's Gaia satellite. They noticed the strange, undulating pattern of gas and stars around Orion when looking at an object known as the Gould Belt, which was first detected more than 100 years ago.

For a century, astronomers have thought the Gould Belt was a ring-shaped circle of starforming gas, with Earth's sun near its center. However, once the authors of the new study began digging into the Gaia data, they realized this does not seem to be the case. Rather, the

> Gould Belt appears to be just a piece of much the larger Radcliffe Wave, which does not form a ring around our solar system but swoops toward and away from it in an enormous waveform. "We don't know what causes this shape, but it could be like a ripple in a pond, as if something extraordinarily massive landed in our galaxy," Alves said.

> > Prior studies of

The yellow dot marks Earth's sun, which may crash into the wave 13 million years from now. Credit: Alyssa Goodman/Harvard University

tive star-forming gas (known in more delightful terms as "stellar the C nurseries").

When observed in 3D atop the rest of the Milky Way, this swooping suburb of babybooming stars appears to be more than just the sum of its parts, study co-author João Alves said in a statement.

"What we've observed is the largest coherent gas structure we know of in the galaxy," said Alves, a professor of astrophysics at the University of Vienna. "The sun lies only 500 light-years from the wave at its closest point. It's been right in front of our eyes all the time, but we couldn't see it until now."

Alves and an international team of colleagues detected the Radcliffe Wave (named for Harvard's Radcliffe Institute for Advanced Study, where the bulk of the research was conducted) the Gould Belt have suggested the same. Perhaps a gigantic blob of dark matter crashed into the young gas cloud millions of years ago, warping the galaxy's gravity and scattering the nearest stars into the pattern seen today, one 2009 study in the journal Monthly Notices of the Royal Astronomical Society posited. "What we do know is that our sun interacts with this structure," Alves said.

According to the researchers, stellar velocity data suggests that our solar system passed through the Radcliffe Wave some 13 million years ago — and, in about another 13 million years, will cross into it again. "Sort of like we are 'surfing the wave," Alves added.

> by Brandon Specktor space.com

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Adopt a Telescope Program - Signup Sheet

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

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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
Jeff Kraehnke	414-333-4656
Jim Schroeter	414-333-3679
Gabe Shaughnessy	7 262-893-4169
Steve Volp	414-751-8334
Mike Wagner	262-547-3321

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March Keyholders			
03/07	Jim Bakic	414-303-7765	
03/14	Steve Volp	414-751-8334	
03/21	Brian Ganiere	414-961-8745	
03/28	Arun Hegde	414-429-1548	



MAS Observatory

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