



June, 2017

## Next Meeting on July 10<sup>th</sup>

The Milwaukee Astronomical Society will hold its next meeting on **Monday, July 10<sup>th</sup>, from 7 PM at the Observatory**. This is going to be a combined Board/Membership Meeting, where during the first hour organizational and Observatory related issues will be discussed. During the second hour we will have a presentation.

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

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## MAS Picnic

Please join us for the Annual MAS Picnic on **Saturday, August 5<sup>th</sup> at 4:00 PM** at the Observatory. Family and friends are welcome.

The event will be held in rain or shine.

Please bring your favorite dish to pass. Beverages and charcoal grill will be provided.

While enjoying the fellowship, you can check out the modernized Quonset if you have not done so yet. Weather permitting we will observe the Sun with the Solar Scope. See you there!

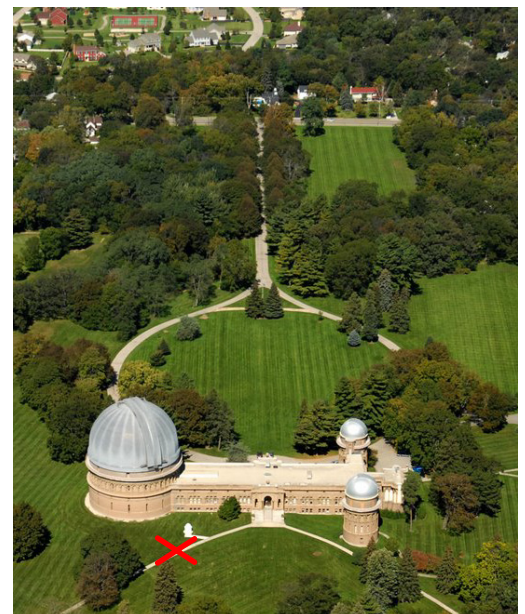
## Yerkes Star Party

Every year the MAS is doing a star party for high school students from inner city Chicago, who are participants of the Yerkes Summer Institute.

This year's star party will be on Sunday, July 30<sup>th</sup>, starting around 7:00 PM in Yerkes back yard (X).

If conditions allow us we show some objects but mostly answer questions regarding our equipment. So it is best to have a variety of telescopes. In exchange, we are provided with a T-shirt with the current year's theme and sometimes with access to the dome of the 40-inch refractor.

The Yerkes Observatory is located in Williams Bay, WI. Take Highway 43 all the way to the Highway 67 Elkhorn/Williams Bay exit. Turn south onto Highway 67 towards Williams Bay.



## Observatory Report

WE Energies has finished the installation of the new 200-amp underground powerline. We need to get 6 or more yards of top soil delivered to the Observatory so it can be spread over where the powerline was trenched. Grass seed will be laid down in September to finish repairing the yard.

Miller Brothers Heating and Cooling have been contacted to set up a time for installing the air conditioner on to the new furnace, they should be out in a couple of weeks to complete their work. The cables that open and close the slit on B-dome have been replaced now and the slit is opening and closing just fine.

The etalon tuner on the Lunt Solar Scope that was sent back to Lunt a few weeks ago has been repaired under warranty and just arrived back today. It will be installed in the next couple of days so the Solar Scope will be back to optimum performance.

The 26" mirror set has been sold to John Allseits for \$1700, a \$500 down payment has been received by the MAS and the balance will be paid when John picks up the mirrors later this summer. John has also shown interest in some of the pieces of the OTA like the mirror cell.

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## Treasurer's Report

<b>\$6,841.91</b>	<b>Starting Balance as of 5/18/2017</b>
	<b><u>Expenditures</u></b>
\$7.48	PayPal fees
\$38.40	Solar scope
\$74.96	B-scope cable
\$25.19	Messier chart project
\$17.34	B-scope repair
\$59.51	WE Energies
\$100.00	Chris Stockdale stipend
\$1,510.85	Quonset project
\$1,905.86	TOTAL Expenditures
	<b><u>Revenue</u></b>
\$100.00	Donations (Girl scouts)
\$500.00	Equipment sales
\$320.00	Membership dues
\$105.00	Public Night
\$1,025.00	TOTAL Revenue
<b>\$5,961.05</b>	<b>Ending Balance as of 6/10/2017</b>

Respectfully Submitted,  
Sue Timlin, Treasurer

## Meeting Minutes

The meeting was held on June 12<sup>th</sup> at the MAS Observatory, New Berlin, and was called to order at 7:05PM by Tamas Kriska President.

**Minutes** of the May Board Meeting electronically submitted by Agnes Keszler Secretary ahead the meeting were approved.

**Treasurer's Report electronically** submitted ahead by Sue Timlin Treasurer was approved.

**Observatory Director's Report** electronically submitted by Paul Borchardt Observatory Director ahead the meeting was approved.

**Membership Committee Report** was electronically submitted by Jeff Kraehnke Committee Chair. Membership application of David Humphreys & Family, Joshua Liebold & Family, David Piek & Family, and Marshall Klapperman & Family were approved.

**Old Business – Solar Eclipse:** Gene is ready with the presentation to do for the Brookfield Library. The same presentation may be held elsewhere upon request. **Electric service:** The upgrade has been completed. **MAS campout:** There is no deadline, but Paul should be notified about planned participation. **Loaner scope:** Tamas offered a 13.5" mirror+secondary as a basis to build a light weight portable scope. Others suggested to buy a 6" Newtonian. The Observatory Committee will consider the possibilities and come up with proposals.

**New Business – Key holder:** Since new members coming with expectation and many keyholders has limited expertise, the duties of keyholdership which definitely exceed simply opening doors will be revisited. **Public outreach:** Requests for star-parties outside the Observatory ground will be judged considering the Club's main focus which is commitment to our members. Jessica Moehr volunteered to help Gene to manage and coordinate the public outreach. **Internet:** As smart phones are commonly used the necessity of internet access is questionable. Imaging computers will not be connected for sure.

Respectfully Submitted  
Agnes Keszler, Secretary

## Membership Report

Since the last Report we received six new membership applications and would like to welcome Scott Campbell & Family, Joshua and Brenna Liebold & Family, Marshall Klapperman, Dean Chapman, Kathy Erickson & Family, and Michael Hastings. We now have 144 active members.

Respectfully Submitted,  
Jeff Kraehnke, Committee Chair

## Observatory Report

When he is here to pick up the mirrors he will decide what parts he wants and a price for the parts will be worked out then. There is a second party who is also in parts of the OTA and will be in town later this summer. Between the two parties I'm hoping to sell off another several hundred dollars of parts from the 26" scope. Any remaining pieces of the scope will be sold as scrap. On a side note, John Allseits is the gentleman who bought seven of the Portascopes last summer. He is very happy with the scopes and they get used regularly for public awareness.

The focus of this meeting is to teach interested members how to use the resources at the Observatory including any of the telescopes and the other MAS equipment there. Members are also welcome to bring their own telescopes to the meetings so they can be shown the proper way of using and maintaining their equipment. Topics for the evening are decided at the time of the meeting by the members in attendance so what they are interested in can be covered.

Respectfully Submitted,  
Paul Borchardt, Observatory Director

## Observatory Tours

We had the first Observatory Tour of the season on Thursday, June 1<sup>st</sup>. Our visitors were Girl Scouts from the Highland View Elementary School. Paul Borchardt gave them a presentation about the history of the Observatory and basic astronomy. Then MAS members showed them the Moon, Jupiter, and some bright deep sky objects through various telescopes. The night concluded around 10 PM, since next morning our young visitors had to go to school.

## Public Nights

Our second Public Night was scheduled for Saturday, June 17<sup>th</sup> at 4 PM with the Sun as topic. Due to the unusual timing, and the pretty poor forecast (clouds and lingering rain, and possible thunderstorms) we looked forward to the event with a certain nervousness. Luckily, the rain stopped around 3 PM, the clouds became thinner, and some guests were able to see the Sun through the Lunt solar scope and regular telescopes equipped with solar filter. We had a considerable turnout, Sue Timlin even repeated her presentation for the late comers.

The next Public Nights will be on Fridays of August 11<sup>th</sup> and 25<sup>th</sup>, both at 8 PM. Any help from members is appreciated.



## Observatory News

### “First Wednesday” Meeting

On June 7<sup>th</sup> the First Wednesday program held its first meeting. The focus of this meeting is to teach interested members how to use the resources at the Observatory including any of the telescopes and the other MAS equipment there. Members are also welcome to bring their own telescopes to the meetings so they can be shown the proper way of using and maintaining their equipment. Topics for the evening are decided at the time of the meeting by the members in attendance so what they are interested in can be discussed.

At the first meeting held on June 7<sup>th</sup> there was a turnout of at least eight members, not bad for the first of a new meeting. The group in



attendance decided that they wanted to start with some basics; the operation of A-scope, B-scope, and the 18” Obsession. A couple of members also brought their own scopes to be shown the proper use of them.

Jason Doyle and myself split the members into two groups, I took my half to the A-scope for the demonstration of how to open the A-dome and the proper way of getting the scope ready for use, observing with it, and how to leave the scope and dome when done. Jason did the same with the other half in the B-dome. When each of us were finished we switched domes and went through the operations again. While in B-scope a



few of the members had questions about how to use setting circles, and with the large and easy to use circles on the B-scope I was able to go over the process of both setting the R.A. circle when starting the scope and



how the setting circles are read.

When I was done in the B-dome my group got back together with Jason’s group where the use of the 18” Obsession demonstrated by Jason. As the meeting was finishing up around 9:00, Jason and myself answered a few questions and also helped the members who brought telescopes figure out how to use them. All of the members in attendance said the meeting was very informative and useful.

The next meeting will be held on August 2, there will be no July meeting due to the 4<sup>th</sup> of July holiday. I would like to point out that if you wanted to hear what was discussed at the June



meeting but didn’t make it, don’t worry. We can go over the same topics if that is what the members who are there want to hear. Again the reason for having this meeting is the teach members what they want to learn about our observatory and the equipment there along with their own telescopes.

Paul Borchartd

## In the Astronomical News

### Sun Likely has a Long-Lost Twin

Nemesis is apparently real, even if its bad reputation is undeserved. For decades, some scientists have speculated that the sun has a companion whose gravitational tug periodically jostles comets out of their normal orbits, sending them careening towards Earth. The resulting impacts have caused mass extinctions, the thinking goes, which explains the putative star's nickname: Nemesis.

Now, a new study reports that almost all sun-like stars are likely born with companions, bolstering the case for the existence of Nemesis. "We are saying, yes, probably was a nemesis, a long time ago," study co-author Steven Stahler, a research astronomer at the University of California, Berkeley, said in a statement.

But the new results don't paint Nemesis as a murderer. The sibling star probably broke free of the sun and melted into the Milky Way galaxy's stellar population billions of years ago, study team members said.

Multistar systems such as Alpha Centauri – the sun's nearest neighbor, which harbors three stars – are common throughout the Milky Way. Indeed, recent computer-simulation research suggests that most if not all stars are born with companions. The new study put this supposition to the observational test. Stahler and lead author Sarah Sadavoy, of the Smithsonian Astrophysical Observatory, studied the Perseus molecular cloud, a large star-forming region about 600 light-years from Earth. Radio

observations of the Perseus cloud by the Very Large Array in New Mexico and the James Clerk Maxwell Telescope in Hawaii revealed 55 young stars in 24 multistar systems (most of which were binary), as well as 45 single star systems.

"The key here is that no one looked before in a systematic way at the relation of real young stars to the clouds that spawn them," Stahler said. Sadavoy and Stahler found that all of the observed "wide binary" systems – the one with stars separated by at

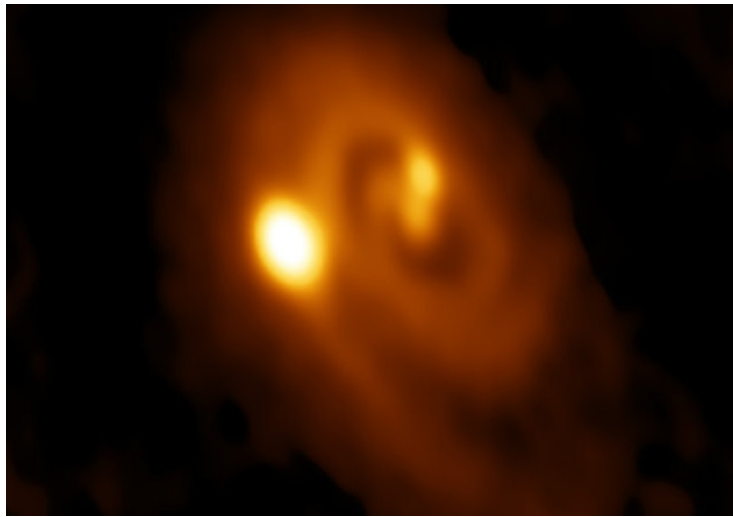
least 500 astronomical units (AU) – were very young. Older binary systems were more compact, the researchers said. (One AU is the average Earth-sun distance: about 93 million miles, or 150 million kilometers.)

The two researchers then did some modeling work to better

understand what they were seeing. "We ran a series of statistical models to see if we could account for the relative population of young single stars and binaries of all separations in the Perseus molecular cloud," Stahler said. "And the only model that could reproduce the data was one in which all stars form initially as wide binaries. These systems then either shrink or break apart within a million years."

In fact, the majority of newborn binary stars – about 60 percent – end up going their separate ways, the duo determined. This was probably the fate of nemesis and the Sun, the new study suggests.

by Mike Wall, Space.com



*A radio image of a triple-star system forming within a dusty disk in the Perseus molecular cloud obtained by the Atacama Large Millimeter/submillimeter Array in Chile. Credit: Bill Saxton, ALMA (ESO/NAOJ/NRAO), NRAO/AUI/NSF.*

## Adopt a Telescope Program - Signup Sheet

<b>Adopter</b>	<b>Scope</b>	<b>Location</b>
<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/Matt Mattioli	8" F/11 Celestron EdgeHD	Ray Zit Observatory
<b>8</b> Tamas Kriska	14" F/1.9 F-scope	Jim Toeller Observatory
<b>9</b> Paul Borchardt	Solar scope	SkyShed POD

### At Your Service

#### Officers / Staff

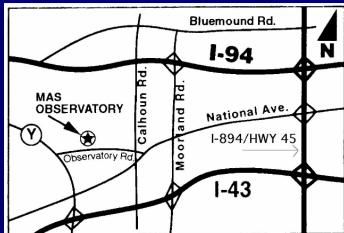
President	Tamas Kriska	414-581-3623
Vice President	Sue Timlin	414-460-4886
Treasurer	Sue Timlin	414-460-4886
Secretary	Agnes Keszler	414-581-7031
Observatory Director	Paul Borchardt	262-781-0169
Asst. Observatory Director	Jeff Kraehnke	414-333-4656
Newsletter Editor	Tamas Kriska	414-581-3623
Webmaster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

#### Board of Directors

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Clark Brizendine	414-305-2605
Robert Burgess	920-559-7472
Jason Doyle	414-678-9110
John Hammetter	414-519-1958
Lee Keith	414-425-2331
Frank Kenney	414-510-3507
Jeff Kraehnke	414-333-4656
Sue Timlin	414-460-4886
Steve Volp	414-751-8334

#### July Keyholders

7/1	Tamas Kriska	414-581-3623
7/8	Jeff Kraehnke	414-333-4656
7/15	Gene Hanson	262-269-9576
7/22	Jill Roberts	414-587-9422
7/29	Tom Schmidtkunz	414-352-1674



#### MAS Observatory

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