



# Focal Point



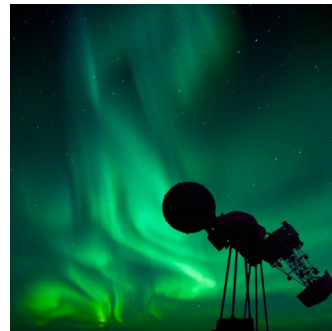
March, 2011

## March 25<sup>th</sup>: Membership Meeting at Manfred Olson Planetarium

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**Time and location change!** The next General Membership Meeting of the MAS is going to be held on March 25<sup>th</sup>, at 8:00PM at the Manfred Olson Planetarium of the UW Milwaukee. The Observatory Director Jean Creighton will be giving a presentation about the Northern Lights (Aurora Borealis). The theatre is equipped with a Spitz A3P optomechanical projector.



Four digital projectors and separate special

projectors are used for visual effects such a rotating Milky Way Galaxy and the Aurora Borealis. The Manfred Olson Planetarium is part of the UW-Milwaukee Physics building (Bld. # 1965), which is located at 1900 E Kenwood Bld., Milwaukee. Parking available in the Science Parking Lot. For further information and driving direction see:

<http://www4.uwm.edu>

### Message from the Vice President:

## A Notice of Proposed Membership Dues Increase

An analysis of the MAS finances by the Treasurer shows that yearly membership dues are currently insufficient to cover recurring expenses, which are the following:

Description	Amount
Phone	\$100
Gas & electric	\$961
Insurance	\$1302
Website	\$150
Fire extinguisher maintenance	\$150
Fire protection fees	\$160
Water district fees	\$37
State incorporation fees	\$10
<b>Total</b>	<b>\$2870</b>
2011 dues received: (71 paid memberships)	\$2205
Difference:	-\$655
Split over 71 memberships:	\$9.37

Therefore, the Board of Directors has voted to propose a dues increase:

Current yearly membership dues are:

Membership Type	Individual	Family	Student
Resident*	\$36.00	\$42.00	\$13.00
Non-Resident	\$23.00	\$27.00	\$13.00

Proposed yearly membership dues are:

Membership Type	Individual	Family	Student
Resident*	\$46.00	\$52.00	\$23.00
Non-Resident	\$33.00	\$37.00	\$23.00

\*Residents of Milwaukee and surrounding Counties

Article IV, Section 4 of the MAS By-laws states that, "Dues may be changed only by majority vote at a membership meeting with at least one (1) month notice." A motion to increase the yearly membership dues will be made at the May 2011 membership meeting.

Brian Ganiere, Vice President

## Treasurer's Report

After 6 month of budgeting, the amount of money for bills for the remainder of the year has been re-estimated. The last several months our electric bill has been substantially lower than the same months last year leaving us with a little more money. December usage was 25% lower than a year ago.

As reported at the February board meeting, our checking account balance is \$4,693.66. The Albrecht fund is at \$7,886.78.

In February the Board passed a resolution recommending that the dues be increased to cover increases in the operating expenses of the society. The recommendation is to raise dues by \$10 for each membership class. The resolution will be put forth to the members at the May meeting - currently scheduled for the 20<sup>th</sup>. There the membership can approve, modify or reject the recommendation. Membership dues were last increased in 2008 when we also faced a cash flow crisis.

Respectfully Submitted,

Neil Simmons, Treasurer

## Observatory Director's Report

The observatory was only used for observing on three nights in three months (one night each in November, December, and January). Neil Simmons (3 nights), Russell Chabot and Jimmy Drzewiecki were the only people who used the telescopes. This was the worst usage of the observatory since there was gas rationing in 1944 due to WWII. Since I returned from China, there was more use in a week or two than the previous three months. Not only myself but Neil, Henry Gerner, and Russell have used the telescopes in mid February.

I would like to point out that the parking area has been cleared out all winter. Even after the big 2-foot snowstorm, it only took an hour and a half to clear the blacktop and make paths to all of the buildings.

Respectfully Submitted,

Gerry Samolyk, Observatory Director

## Membership Meeting Minutes

**Held** on February 18<sup>th</sup> at Horwitz Planetarium

The meeting was called to order at 8:00 PM by Vice President, Brian Ganiere.

**Minutes** of the January 21<sup>st</sup> General Meeting were read and approved.

**Treasurer's Report** was summarized by Brian Ganiere, copy attached. (see on this page).

There was no **Observatory Director's report**.

**Old Business** - Brian mentioned again that we are looking for someone to fill the unexpired term for Virgil Tagney's Board position which ends in May of 2013.

Tim Burrus reported that a considerable amount of MAS information was handed out at Retzer's Winter Janboree and Wild Winter Night, and at the Lapham Peak Ski and Hike event.

It was mentioned that the current MAS Public Night schedule, put together by Steve Diesso, was now on the MAS website.

Jill Roberts announced that she had MAS flyers and Public Night cards printed at Anchor Printing for a very reasonable cost.

There was no **New Business**

**The Program** - was a Planetarium show presented by Manuel Oyervides, titled "Journey to the Stars".

The next General Meeting will be on March 18<sup>th</sup> with the location to be announced.

The meeting was adjourned at 8:45 PM.

Respectfully Submitted,

Lana Silke, Secretary

## Announcements

### MAS Survey

We want to hear from you! Are you interested in the MAS providing classes in astronomy? If so, we want to know what you would be interested in learning. To take the short survey, point your web browser at <http://www.surveymonkey.com/s/FYLK7JW>.

by Russell Chabot and Neil Simmons

### First Public Observing Night on April 8<sup>th</sup> — The Moon

The first public observing night is scheduled for April 8 at 7:30PM at the MAS Observatory. Topic: **the Moon**. The evening will include a tour of the observatory, a short program about the Moon, and viewing thru the telescopes if the weather permits. We are planning to collect a parking fee of \$5/vehicle. Also, we will distribute flyers about MAS, and Membership Application Forms in an attempt to recruit new members. The event will be held in rain, shine, and starlight. The kind help of MAS members during the night is encouraged and highly appreciated.

2011 Public Observing Nights	
April 8	The Moon
May 6	Eta Aquarid Meteors
May 27	Saturn's Rings
June 24	The Sun & Sunspots
August 19	The Milky Way Galaxy
September 23	Galaxies
October 14	The Fall Constellations

### Adopt a Telescope

As we already announced in the February issue we would like to make the buildings and domes of the MAS Observatory more organized and clean to keep our instruments in better shape.

Since then, we had two more volunteers to adopt telescopes. As you can see in a sign-up sheet on page 7 there are still open spots, moreover each telescope could be adopted by multiple persons.

The person who adopts a telescope would be responsible for sweeping the floor, making sure that the eyepieces are clean and put away after our public meetings. It is also necessary getting rid of the cobwebs and wasp nests or bee hives on or around the telescope. If you would not feel safe to do this you can ask me to help you out. The maintenance would not be the adoptee's duty, he/she just needs to call for it.

More information about the buildings can be found in the MAS website. The Z-Two scope, which is not listed there is also a roll off roof observatory.

This program would be an excellent opportunity for new/less experienced members to get familiar with the MAS's equipment.

We hope this initiative is going to make the MAS Observatory more presentable and attractive during the Public Observing Nights.

If you made up your mind please let me know in person, by phone (414-559-3502) or by email: [ahynes@wi.rr.com](mailto:ahynes@wi.rr.com).

by Russell Chabot  
Observatory Committee Chair



## Product Review

### Sky and Telescope's Complete Seven Decade Collection

I bought my first Sky and Telescope in 1977 and with the exception of a few years in the late eighties I haven't stopped. I have not only saved every one, but I have purchased used copies to fill in the ones I missed during that time. I found that the cheapest and most efficient way to store all those magazines are in hanging folders in file cabinets or banker boxes. They are quite heavy and I have moved to a number of homes with my collection.

So when the Seven Decade Collection on DVD came out late last year, I spent some time seriously considering the expense. At nearly 300 dollars this was no casual purchase as I could easily buy a small telescope for that amount. The space savings would be enormous if the CD set were of sufficient quality to be as useful as the paper product, so I took a chance and bought a set.

The magazines are viewed on a web browser through a flash application. While flash is very common these days, as a programmer I am not sure this would have been my first choice. Why was flash chosen over pdf format for storage and display of printed material - something that the portable document format (pdf) was designed to be?

The quality of the images of the physical magazines are not spectacular, but quite good in some cases. The older magazines are slightly discolored and fuzzy. This is probably due to age and perhaps the print technology of the time of publication. I find it fascinating to compare recollections of photos from 30 years ago compared to the way I see it today. It is truly amazing what amateurs accomplished with what we would today call "so little technology."

From the user's experience, there is a noticeable and sometimes irritating delay when flipping between pages as the information is loaded up from the CD. Although it takes some getting used to, the page flipping is animated and looks just like you are flipping through the issue. There is a wonderful table of contents for each

issue that helps you flip around to different articles in just a click. Sometimes the page loading from the CD is a little slow, and I wonder why the whole issue isn't cached into memory or the hard drive - both of which are far faster data retrieval devices. There is a separate disk that indexes the whole collection. I found a treasure trove of variable star articles using this.

Printing from the collection is a frustrating exercise in that one must toy with the scaling factor for it to fit on a page of ordinary printer paper. This is something that comes fairly automatically with a pdf viewer and I am rather shocked at the lack of sophistication here. Still, it can be done and with a quality comparable to taking a magazine to a modern copy machine.

There are some restrictions in use that are understandable. For example, with the exception of the front and back cover all views are of two facing pages. The process of going from a printed document such as a magazine requires manual labor and can only be automated so far. Imaging two pages at a time is less costly than imaging a page at a time. The two pages look really small at first glance - but not to worry: the product designers provided a zoom feature that works well.

As an interesting aside, the young MAS was listed in the first issue of Sky and Telescope in 1941. Using the index disk it is easy to find references to the MAS and peek into history. As a member of the MAS you have always had access to not only Sky and Telescope, but also copies of the pre-cursor publication, The Sky. However this product makes it easy to access history from your own computer.

All and all I am happy to have access to 70 years of Sky and Telescope for my own home. In a year or so, I may finally box up all but the most sentimental issues of the publication I have read since high school.

By Neil Simmons

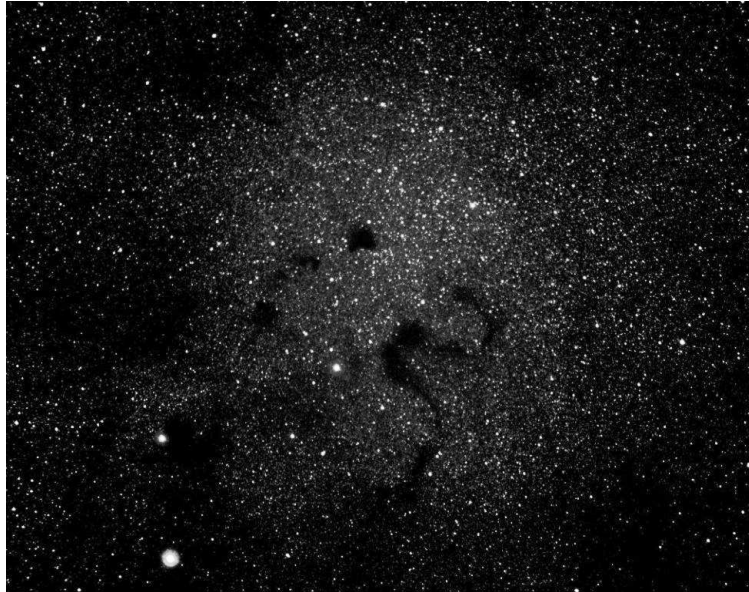


## Member's Stories

### Imaging Faint Galaxies

I am taking the MAS up on the request for member photo submissions. When I joined the society in the late 70s or early 80s I was asked what my astronomy interest was and I wrote it was trying to find all the galaxies visible to a 10" Dob from our latitude. Little did I know that 30 years later I would not have achieved my goal. I did not know how many of them are out there. But I can proudly say I saw just under 6000 visually through the telescope (later a 13") and I have now imaged another 7500. I plan to stop counting at 15000.

I started imaging about 4 years ago. My main interest is imaging faint galaxies which are not good viewing. My image is the Snake Nebula in the constellation Ophiuchus taken in August,



2010, from my favorite closet dark spot in western Wisconsin (just south of Reedsburg) that I have been using since the 1980s. I thought it would be best in black and white.

It results from 5 3-minute images taken with an 11" Schmidt-Cassegrain Celestron telescope with a HyperStar lens mounted on an equatorial Losmandy GM8. The camera is a QHY PRO8. It is preprocessed only using Nebulosity2 software which runs both my Orion star shoot guider and QHY camera. I am a

novice at image processing and I plan to get into Photoshop next.

When I'm not pursuing my galactic search I find time to image some other pretty things.

by **Raymond D. Horvath**

## Classifieds

The **Night Skies stencils** could help decorate any home of those associated with the Milwaukee Astronomical Society or the MAS observatory.

These products can create accurate displays of the sky at night in any darkened room with the luminous paint that is included. They are produced in two sizes featuring either the winter or summer night time displays over the Northern Hemisphere. A corresponding star map is also included. More information about the Night Skies is available at [www.ursamajorstencils.com](http://www.ursamajorstencils.com). The 8 foot Night Skies are priced at \$25.00 and the 12 foot at \$30.00 each. Prices for qualified wholesale purchases are half those amounts.

You simply affix the stencil to the ceiling (the adhesive won't stain or remove paint) and paint the stencil holes with the special glow-in-the-dark

paint, than remove it. After exposing them to normal room light, the stars will glow for up to 30 minutes in the dark.

For freight, we ask that you only pay the exact shipping costs from our manufacturing facility in Macomb, Illinois (61455). Either size weighs 2 pounds each to ship and we will "DROP SHIP" any number directly to any address.

Bridgeway Training Services is a not-for-profit agency that provides a variety of services to disabled persons. The sale of our American-made products help fund those programs.

by Dick Shimmin  
Bridgeway Training Services Galesburg, IL  
Email for orders; [suzannef@bway.org](mailto:suzannef@bway.org)

## In the Astronomical News

### Planet Formation in Action

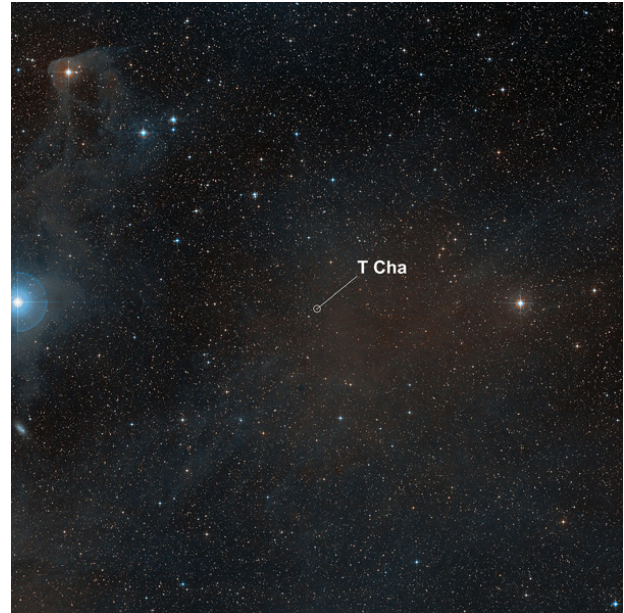
Using European Southern Observatory's (ESO) Very Large Telescope an international team of astronomers has been able to study the short-lived disc of material around a young star that is in the early stages of making a planetary system. For the first time a smaller companion could be detected that may be the cause of the large gap found in the disc. Future observations will determine whether this companion is a planet or a brown dwarf.

Planets form from the discs of material around young stars. The transitional discs give off less radiation at mid-infrared wavelengths. The clearing of the dust close to the star and the creation of gaps and holes can explain this missing radiation. Recently formed planets may have created these gaps, although there are also other possibilities. The transition from dust disc to planetary system is so rapid that only few objects were caught during this phase so far.

One such object is T Chamaeleontis (T Cha), a faint star in the small southern constellation of Chamaeleon that is comparable to the Sun, but very near the beginning of its life. T Cha lies about 350 light-years from the Earth and is only about seven million years old. Up to now no forming planets have been found in these transitional discs, although planets in more mature discs have been seen before.

*“Earlier studies had shown that T Cha was an excellent target for studying how planetary systems form,”* notes Johan Olofsson (Max Planck Institute for Astronomy, Heidelberg, Germany), one of the lead authors of two papers in the journal of *Astronomy & Astrophysics* that describe these findings. *“But this star is quite distant and the full power of the Very Large Telescope Interferometer (VLTI) was needed to resolve very fine details and see what is going on in the dust disc.”*

The astronomers first observed T Cha using the AMBER (Astronomical Multi-BEam combineR) instrument and the VLTI Interferometer (VLTI) which combines the light from all four of the 8.2-meters VLT Unit Telescopes and create a “virtual telescope” of 130 meters in diameter. They found that some of the disc material formed a narrow dusty ring only about 20 million kilometers from the star. Beyond this inner disc, they found a region devoid of dust with the outer part of the



disc stretching out into regions beyond about 1.1 billion kilometers from the star.

However, finding a faint companion so close to a bright star is a huge challenge and the team had to use an adaptive optics instrument called NACO attached to the VLT. Thanks to adaptive optics, astronomers could remove most of the blurring effect of the atmosphere and obtain very sharp images. The team used NACO in a novel way, called sparse aperture masking (SAM) to search for the companion. This is a type of interferometry that, rather than combining the light from multiple telescopes as the VLTI does, uses different parts of the mirror of a single telescope (in this case, the mirror of the VLT Unit Telescope 4). After careful analysis they found the clear signature of an object located within the gap in the dust disc, about one billion kilometers from the star — slightly further out than Jupiter is within our Solar System and close to the outer edge of the gap. This is the first detection of an object much smaller than a star within a gap in the planet-forming dust disc around a young star. The data provided by NACO suggests that the companion object is too cold to be a normal star but it could be either a brown dwarf surrounded by dust or, most excitingly, a recently formed planet.

By ESO, Garching, Germany

## Adopt a Telescope Program - Signup Sheet

	<b>Adoptee</b>	<b>Scope</b>	<b>Location</b>
<b>1</b>	Sue Timlin	18" F/4.5 Obsession	D Shed
<b>2</b>	Neil Simmons	12.5" F/7.4 Buckstaff	B Dome
<b>3</b>		12.5" F/9 Armfield	A Dome
<b>4</b>	Dan Yanko	10" F/6 Newtonian	Albrecht Observatory
<b>5</b>	Tamas Kriska	25" F/15 Zemlock	Z Dome
<b>6</b>	Henry Gerner	12" LX 200	Tagney Observatory
<b>7</b>		14" Z-Two scope	Z-Two Observatory
<b>8</b>		10" LX 200	Tagney Two (T-Two) Observatory

### At Your Service

#### Officers / Staff

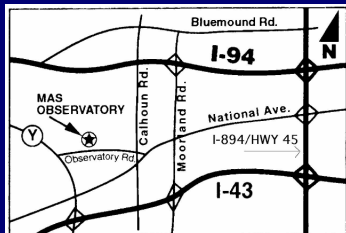
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Secretary	Lana Silke	262-966-4929
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Asst. Observatory Director	Henry Gerner	414-774-9194
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Webmaster	Steve Diesso	262-641-0331

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Jill Roberts	414-587-9422
Lana Silke	262-966-4929
Neil Simmons	262-889-2039
Sue Timlin	414-460-4886
Dan Yanko	262-255-3482

#### February/March Key Holders

3/19	Lee Keith	414-425-233
3/26	Scott Laskowski	414-421-3517
4/2	Jill Roberts	414-587-9422
4/9	Tom Schmidtkunz	414-352-1674
4/16	Neil Simmons	262-889-2039



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