



# Focal Point



August, 2011

## Star Party at Yerkes

On August 7<sup>th</sup> the MAS hosted a star party for the students of the Yerkes Summer Institute in Williams Bay, WI.

Eight members represented the Society. Detailed description of the event can be found on page 3.



The view of the Yerkes Observatory at sunset during the preparation for the Party.

## Public Observing Nights

The fifth public observing night is scheduled for August 19<sup>th</sup> at 7:30PM at the MAS Observatory. Topic: **The Milky Way Galaxy**. The kind help of MAS members during the night is encouraged and highly appreciated.

### 2011 Public Observing Nights

August 19	The Milky Way Galaxy
September 23	Galaxies
October 14	The Fall Constellations

## Treasurer's Report

July showed little financial activity with not much changed since the previous month. The renewal notices for the next year were mailed out on August 1 and are returning in a constant stream. As of August 6, the checking account contains \$2,957.98, much of which is reserved for projects.

Respectfully submitted by Neil Simmons, Treasure

## Next Membership Meeting in September

After the summer break the first General Membership Meeting is going to be held on September 16<sup>th</sup> at the MAS Observatory, with an invited guest speaker. More information in the next issue of the Focal Point. **Stay tuned!**

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## Sky Puppies

The Astronomical League runs a program designed for children (10 years of age or younger – “Sky Puppies”) to get them familiar with the night sky and to teach the basic skills necessary to become a young observer.

Requirements for Sky Puppies Club Membership:

- Child must be 10 years or younger in age.
- Parent must be a member of AL.
- Child must complete all of the projects, with completion substantiated by documentation.
- Copies of all documentation must be signed by a parent or mentor and submitted with a letter stating the date-of-birth of the Sky Puppy candidate to the Sky Puppies Club Chair.
- Child must complete all projects prior to his/her eleventh birthday.
- Child's club membership request must be submitted no later than the twelfth birthday.
- The membership request should include the address to which the pin and certificate should be sent -- whether to child's home or to his/her local astronomy club for a formal presentation.

According to the information available on AL website the Sky Puppies Club is organized for children who's either parent is an AL member. However, having a correspondence with Kevin Cornwell ([kevin@cornwell.net](mailto:kevin@cornwell.net)) Sky Puppy Club Chair, I learned that every AL member is eligible to mentor a child; relationship should not be a requirement.

Now we are provided with an excellent opportunity to participate in bringing up the next generation of amateur (or maybe professional) astronomers. It would be a part of our outreach. So, MAS Members who are also members of AL, and feel motivation to coach a Sky Puppy are strongly encouraged to partake. Dear MAS Member, if you want to be a mentor but you are not in the AL, you always can join. Also, if you are not and won't be an AL member, but happen to know young kids with an interest in the program can take your share in our outreach.

by Sue Timlin



### Sky Puppy Project requirements :

1. Must draw by freehand 15 constellation patterns (with or without stick-figures and not necessarily from memory).
2. Without aids or assistance, must be able to positively identify in the night sky the same 15 constellations.
3. Must be able to identify and briefly describe any major stars or naked-eye objects in each constellation (i.e., "Betelgeuse is a red super-giant star," or "that fuzzy patch is the Andromeda Galaxy").
4. Must be able to tell two different traditional constellation stories from a cultural tradition of the child's choice.
5. Must be able to use binoculars to locate and identify five deep-space objects from this list suited to binocular observing:
  - a. M42, the Orion nebula
  - b. M31, the Andromeda galaxy
  - c. Albireo, a double star in Cygnus
  - d. The large and/or small Magellanic Clouds
  - e. The Pleiades
  - f. The Hyades
  - g. a Globular cluster
  - h. The Beehive cluster.
6. Must be able to identify and describe the Milky Way.
7. Must be able to find the North Star (or the Southern Cross).
8. Must keep a log of all observations. Each entry must provide object, date, naked-eye or binocular, and notes.
9. Must draw a rough sketch of one of the following:
  - a. Jupiter with as many of the four Galilean moons as can be seen
  - b. The sun with sunspots
  - c. A crater on the moon.



## Star Party at Yerkes

In the past decade MAS has been instrumental to putting on a star party at Yerkes Observatory around the first weekend in August for the one week Yerkes Summer Institute held there by the Kavli Institute for Cosmological Physics. The participants are African American high school students from inner city Chicago,



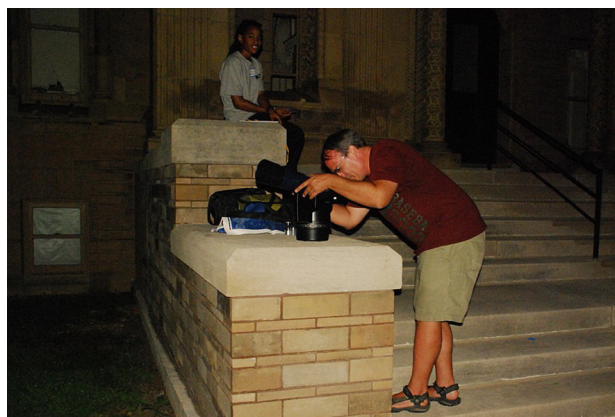
many of them have never seen a dark sky. An average student stays in the program for three years. Program graduates succeed at a rate that is over five times better than their peers: 100% in college, 54% Science Technology, Engineering & Math majors. This year's star party was held on August 7<sup>th</sup>. MAS was represented by eight members: Russell Chabot, Agnes Keszler, Tamas Kriska, Frank Landi, Scott Laskowski, Paul Smith, Neil Simmons, and Sue Timlin. Although, most of the day was cloudy the sky cleared up by the sunset and stayed clear during the night. Students showed great interest in observation, MAS members had to answer lots of questions.



Sue and Neil are answering the students questions



Scott is explaining to a student what he is suppose to see thru the scope.



Paul is searching for Saturn with his backpack scope



Russell brought a MAS loaner scope with a recently recoated mirror to the event. He was very satisfied with the image quality the scope produced.



## MAS Events

### 2011 Summer Picnic

Our 2011 summer picnic was held on Saturday, July 30. At least 21 people came and enjoyed the hot, humid weather. Everyone had a good time, visiting and bringing others up to date on their lives and the happenings at the observatory. There were some members there who we hadn't seen in a long time, like Scott Laskowski. It was good to see him and he's looking great. The MAS provided the soda, water & beer, as well as a lighted charcoal grill for everyone to use. Brian cooked some burgers and brats. He brought out a delicious MAS cake later, which we all enjoyed. Other members brought dishes to share as well. The weather cooperated for once and we had clear sky for the afternoon and into the evening.

Five members remained at the grounds to do some observing. Jim Drzewiecki and Neil Drake arrived after the picnic broke up to do some observing with Sue Timlin at the 18-inch. Russell and Neil set up the Buckstaff scope while an eclipsing binary was running on the 10 inch LX-200. They managed to take some images.

Even a visitor was picked up looking for help with doing astronomy with his binoculars. The last observer left at about 1 AM.

Not only was the picnic a success, but the evening was a great for observing. It was an enjoyable afternoon with fine food and conversation!

by Russell Chabot, Lana Silke, and Neil Simmons



## MAS Events

### Work Party: Preparation for the Picnic

On July 23<sup>rd</sup> Russell organized a work party to prepare the Observatory for the annual picnic. Five members participated: Russell Chabot, Brian Ganiere, Scott Jamieson, Agnes Keszler, and Tamas Kriska. The A-dome building with both restrooms were cleaned. The lawn was mowed, with edges having trimmed. Russell cleaned both charcoal grills. Brian cut one main branch from the apple tree which were split apart and partially broken by a storm couple of week ago.



## Member's Stories

Unfortunately, no contribution was submitted this month into the Member's Story section.

We keep encouraging all members to share the description of their astronomical activity with others.



## In the Astronomical News

### Astronomers Spot a New Piece of the Milky Way Galaxy

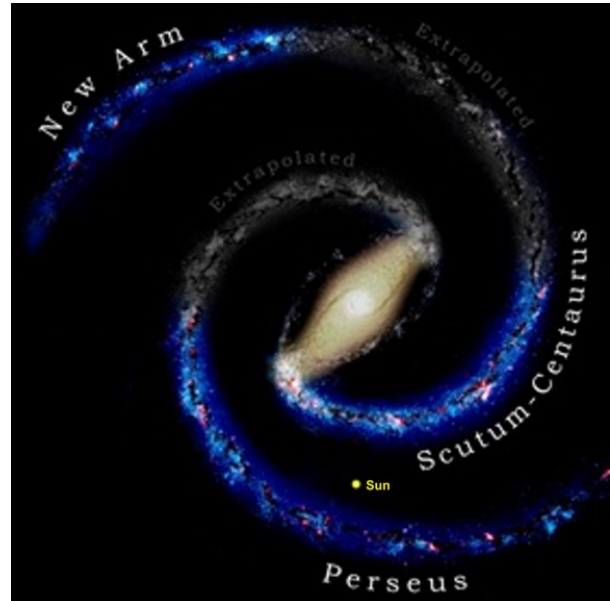
Fantastically detailed photographs of Andromeda, a spiral galaxy that lies 2.5 million light-years from Earth, have been available for years. But getting a full panorama of our own Milky Way Galaxy is considerably more difficult. For astronomers trying to map out the Milky Way's structure in detail, the exercise is a bit like trying to figure out what one's own face looks like—without the aid of a mirror.

That means that new discoveries are still possible in our own cosmic backyard, a fact made apparent by a new study that identifies a previously unseen spiral arm of the Milky Way. The newfound structure, some 70,000 light-years away, may be the continuation of a major, previously known spiral arm, part of which is visible much closer to Earth. Thomas Dame and Patrick Thaddeus of the Harvard-Smithsonian Center for Astrophysics announce the finding in a study that is set to appear in [\*The Astrophysical Journal Letters\*](#).

Dame and Thaddeus found the new appendage by tracing the well-known Scutum-Centaurus arm to where it ought to extend on the far side of the galaxy. Something tantalizing showed up in telescope surveys that had scanned the galaxy for microwave emissions from hydrogen atoms. But with so much hydrogen in the galaxy, discrete structures can be hard to identify, and false positives abound. "You can pick up all kinds of patterns in the wallpaper" with hydrogen, Dame says.

Instead they went looking for carbon monoxide, which is thought to be a reliable tracer of the kind of molecular gas clouds that form stars. Finding molecular clouds strung along the purported arm would verify that it was a genuine piece of the Milky Way's structure and not a mere pattern in the wallpaper. And indeed the researchers did find several molecular clouds along the arm, one of which they mapped out in detail. It is roughly 300 light-years in diameter, with the mass of 50,000 suns. Mapping the entire arm will take years, Dame says.

The location of the arm matches where the Scutum-Centaurus arm would emerge from behind the galactic center. It is nearly impossible to see the middle span of Scutum-



A simplified schematic view of the Milky Way Galaxy, showing only the two large spiral arms believed to originate at either end of the central bar. The grey segments are extrapolations between actual observations. Image: COURTESY THOMAS DAME

Centaurus behind the center that would connect the inner portion of the arm to the newfound outer portion. The Perseus arm, a sort of mirror image of Scutum-Centaurus whose arc carries it past the sun's neighborhood, wraps around the galaxy in just the way it now appears Scutum-Centaurus does on the opposite side of the galaxy.

So it is not entirely unexpected that such a structure would exist; some artists' renderings have shown Scutum-Centaurus encircling the galaxy in just the way that the new observations suggest. But seeing is believing, and the new arm has not been convincingly spotted before. "I would say that it's been scarcely noticed," Dame says. "A couple other people sort of drew a line through it and didn't even mention it."

The new structure is at the very edge of the galaxy, where stars become scarce, but there may nonetheless be some stars there to complement the gas astronomers have detected. "It's interesting, of course, that there are molecular clouds there," Dame says. "It's hard to prevent molecular clouds from forming stars."

by John Matson

## Adopt a Telescope Program - Signup Sheet

	Adoptee	Scope	Location
<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	Tangney Observatory
<b>7</b>		14" Z-Two scope	Ray Zit Observatory
<b>8</b>		10" LX 200	Jim Toeller Observatory

- Telescopes still waiting for adoption

### At Your Service

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#### August/September Key Holders

8/20	Henry Gerner	414-774-9194
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9/10	Scott Jamieson	262-896-0199
9/17	Lee Keith	414-425-2331
9/24	Scott Laskowski	414-421-3517



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