



Focal Point



June, 2013

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Election Results

Election was held on Friday, May 31st, at the MAS Observatory, New Berlin. 21 members were present comprising a quorum. Al Hovey's second Board Director term has expired. Chris Hesseltine whose first term expired was not running for second term.

The election committee nominated Gene Hanson and John Pilarski. Nominations also came from the floor: Lee Keith and John Hammetter. John Pilarski withdrew his nomination. By ballot vote Lee Keith (18 votes) and Gene Hanson (15 votes) were elected to the Board of Directors. John Hammetter received 5 votes. The Board nominated him to fill Henry Gerner's vacant position. Russell Chabot and Sue Timlin were reelected to their second term.

The new Board of Directors then elected the Officers. Scott Jamieson became the new President. The Vice President remained Brian Ganiere, Agnes Keszler will continue to serve as Secretary, Russell Chabot was elected as Treasurer. The position of the Observatory Director and

Assistant Observatory director remained vacant.

Many thanks to outgoing Directors Chris Hesseltine and Al Hovey, and to outgoing Treasurer Neil Simmons. Special thanks to outgoing Observatory Director Gerry Samolyk for his more than three decades at the helm of the Observatory. See Gerry's final Observatory Directors Report on page 3.

The following Standing Committee Chairs were appointed by the Vice President:

- Program Planning Committee - Brian Ganiere
- Publicity Committee - Vacant
- Membership Committee - Tamas Kriska
- Observatory Committee - Scott Jamieson

Please contact any Officer or Director if you have an interest in the position of Observatory Director, or if you have an interest in getting involved in the Standing Committees, particularly the Publicity Committee and the Observatory Committee.

The MAS Summer Schedule

There will be no General Membership Meeting in June, July, and August. The September Meeting will be announced in August issue of this newsletter. We will hold our annual **MAS Picnic on July 27th**, at 5:00 PM at the MAS Observatory. The next Public Night will be on August 9th. Topic: Meteor Showers.

The use of the Observatory is not affected by the summer schedule. Remember: Saturday nights are the keyholder nights! See you there.

Treasurer's Report

The MAS has received \$35 from Parking Donations, and Cash Deposit.

Payments of energy bill, and bathroom supplies totaled \$105.13.

The checking account balance as of May 31th is \$5,246.73. The Albrecht fund is \$8,214.40.

Respectfully Submitted,
Neil Simmons, Treasurer

Public Night

On June 7th the MAS held the second Public Night of the season. An estimated 25 guests showed up. The topic was: **Our Energetic Sun**. Brian Ganiere gave a talk.

Before and after the presentation guests could enjoy a view of the Sun through the B-scope and the Coronado solar (H-alpha) telescope. Brian and Russell also brought their scopes. Those who stayed longer saw the beautiful Saturn and some deep sky objects.

The next Public Night will be on August 9th about the Meteor showers. Any help from members would be greatly appreciated.

2013 Public Observing Nights	
May 10, 19:30	Inner Planets Lee Keith
June 7, 18:00	Our Energetic Sun Brian Ganiere
August 9, 19:30	Meteor Showers Celeste Keith
September 6, 19:30	Deep Sky Objects Tamas Kriska
September 27, 19:30	Constellation Culture Sue Timlin
October 11, 19:30	The Moon Neil Simmons

Meeting Minutes

Held on May 31st at the MAS Observatory, New Berlin. The meeting was called to order at 8:02 PM by Vice President, Brian Ganiere.

Minutes of the April General Meeting, was read and approved.

The **Treasurer's Report** was submitted by Treasurer, Neil Simmons. Copy attached.

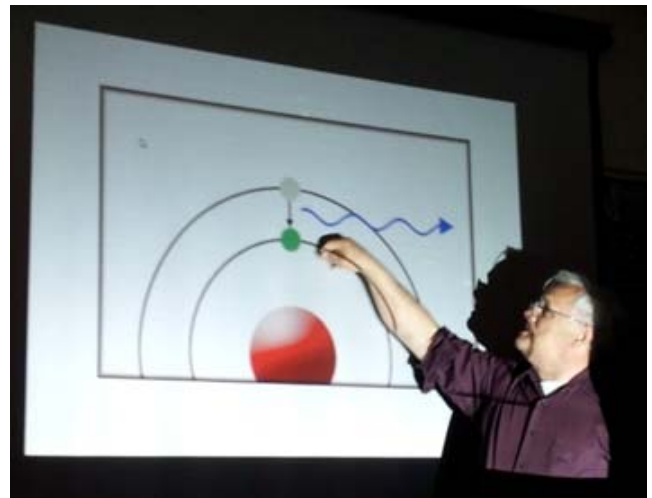
Correspondence - The Kelly Senior Center at Cudahy asked for a sky party to be organized at their place during the fall.

Observatory Director's Report was submitted by Gerry Samolyk Observatory Director. See page 3.

Announcement - Russell is organizing a grass-cutting work party to get the Observatory prepared for the upcoming Public Night. Signup sheets are available for volunteering on Public Nights. Russell will be giving classes on keyholder Saturday nights at 7PM which will be announced on the Google group.

Election - Three new Directors were elected by the membership. Then the new Board of Directors voted for officers. Detailed results are on page 1.

The Program Scott Jamieson gave a presentation entitled **Narrow Band Imaging - How it works and how practical would it be for use on the MAS 25 inch telescope**.



The meeting was adjourned at 9:50 PM

Respectfully Submitted,
Agnes Keszler, Secretary

Final Observatory Director's Report from Gerry Samolyk

My current work travel makes it impossible for me to continue as the Observatory Director for the MAS. Therefore, after a third of a century, I will retire from the position at the end of my current term this month. To put this period of time in prospective, when I was first elected as Observatory Director, it was less than a year since Skylab reentered the Earth's atmosphere and a year before the first orbital test flight of a space shuttle.

First of all, I would like to thank the four people who served as assistant observatory director during these years. They are (chronologically) John Asztalos, Paul Borchardt, Henry Gerner, and Russell Chabot. We faced many different challenges over the years and I could not have succeeded without help. By contrast, we have had 12 presidents (and one acting president) during the past 33 years and the other MAS offices have changed hands many times as well.

My first project as Observatory Director was the 25" scope. The construction of the building was a lot of hard work but it dealt with straightforward construction techniques. Originally, Delco planned to donate a 22 foot dome, but that donation fell thru. This forced us to design and build a dome ourselves. Over a few months, a design took shape that would fit into our limited budget (we did NOT have the endowment fund at that time). The structure was built in the fall of 1981 and the skin was installed a week before the first snowfall of that winter. It took additional work to build the shutter and make it operate smoothly. The shutter was finally motorized in 1989.

At that time, the MAS was fortunate to have a number of designers, tool makers, machinists, and fabricators among its members. Most of the parts for the telescope were fabricated and

machined by volunteers or through donated services from local companies. All of the designs and drawings were made by members in our spare time. The assembly of the telescope took place on weekends as the components were made. The only item that was outsourced was the grinding and figuring of the optics. The "first light" took place in 1984.

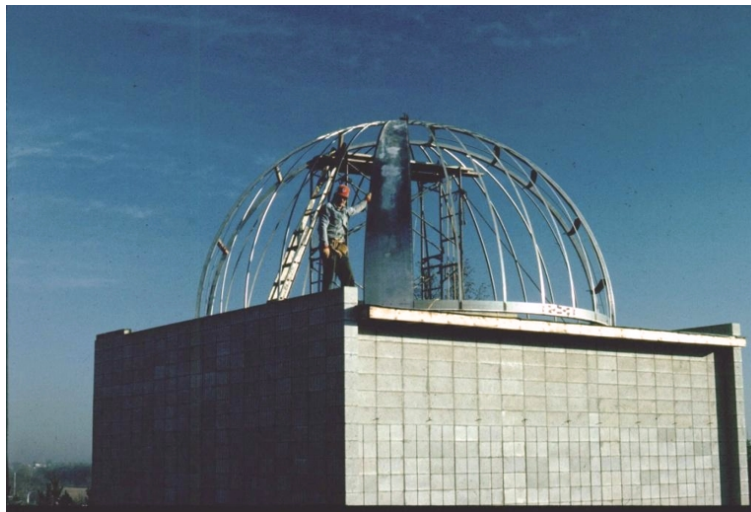
In 85 and 86 we had the return of comet Halley. Although it was a very unfavorable passage, this event generated a lot of publicity. We have had much better comets, like comet

West and comet Hale-Bopp, but Halley has the best name recognition. The close Mars opposition of 1988 also generated a lot of interest. We had a very unique event in 1989 when the planet Saturn and its rings occulted a bright star, 28 Sgr. Over the course of three hours, we were able to watch the star get dimmer and brighter, and

sometimes disappear completely, as it passed behind the rings. Even the Cassini division contains many faint ringlets that were observable using this method.

Two construction projects were tackled in 1990 and 1991. The garage near the driveway was built in the fall of 1990. This building was built primarily with donated lumber and concrete. The tool shed, in the north east corner of the property, was falling down so it was replaced in the summer of 1991. There was a lot of discussion about replacing the satellite shed but that project did not have much support on the board. That building was torn down in 2000 after the east wall collapsed.

One observing activity that came to an end was the observations of Grazing Occultations of stars by the Moon. Since the 1960's, we had used these observations to map the polar regions of the Moon to a high accuracy. Over the past



The first panel of skin being installed on the structure of the dome in 1981

decade however, a new generation of spacecraft in lunar polar orbit have made this activity obsolete. By contrast, starting in the 1990's, we have been using a similar observing technique to map the shapes of asteroids. In the past 10 years or so, I have recorded a number of successful occultations. These events are best observed by video but they are still not a sure thing. It takes some planning and a little luck.

The two original roll away observatories were in bad condition. They also could not be moved if there was snow on the ground. These were replaced with three roll off roof observatories between 1999 and 2005. The new design offers a more comfortable observing environment and is very easy for beginners to use. These observatories also inspired the creation of the intermediate key to give newer members access to the telescopes.

In 1998, the MAS purchased its first CCD camera. Over the following years, four ST9 cameras were purchased. Three of these cameras are equipped with filter wheels to allow color imaging as well as V band photometry. The imaging capability gave the observatory a new lease on life in the face of increasing light pollution. While the site is still fine for lunar and planetary observing, as well as double stars; only the brighter deep sky objects can now be viewed visually.

Two of the CCD cameras are mounted on LX200 scopes in flip top observatories and are connected to computers in a heated office. As with all of the earlier buildings, these were designed and built by MAS volunteers.

Although it is not an observatory function, I continue to chase total solar eclipses. I started before I was elected to the Observatory Director job and will continue after. Four of my total (and three annular) eclipse trips have included other MAS members. I have seen a total solar eclipse on every continent except Antarctica.

Going forward, a big challenge that the MAS faces is the light pollution at our New Berlin observatory. Thirty three years ago, the Milky Way was still very bright from the MAS site. Objects like M31, M44, and the double cluster were visible to the naked eye. I remember seeing the Horse Head nebula easily in one of the 10 inch scopes. Our first attempt to obtain a dark sky observing site was back in 1975 when a property west of Holy Hill was offered, but the donation fell thru. There have been a few other attempts with the most promising being about 10 years ago. We

almost purchased land in the southern unit of the Kettle Moraine but that deal also fell thru at the last minute. I still feel that the MAS should obtain a dark sky observing location. It can start off as a remote site that can be used by our members with their own scopes, and then be developed based on usage. It is a good investment because the land will not lose value.



Completion of the Jim Toeller observatory in 2007

Finally, although I am retiring from office, I will remain a member of the MAS, and am still very active in astronomy. I continue to lead the Short Period Pulsator Section of the AAVSO and am a co-leader of the Eclipsing Binary Section as well. I work with observers from around the world; analyzing observations and publishing results, as well as mentoring new observers. I made my first visual observation of an eclipsing star back in 1974 and started observing RR Lyrae type stars in 1978. I have been observing these stars long enough to see many changes in their periods. I continue my program of CCD observations of Eclipsing Binary and Pulsating stars and have added Cepheid stars as well as Mira. There are so many things going on in the night sky, it never gets boring.

Gerry Samolyk
Deyang, China
May, 2013

Announcements

Astronomical League Membership

It is time to renew our membership for MAS members who want to join the Astronomy League. They will be having their ALCON Convention in July. Check out the web site and let me know if you are interested in joining the Astronomical League. The annual dues are \$7.50 per member per year. If 90% of the club joined the AL then the dues would only be \$5.00 per member per year. Write me at danheleny@aol.com if you are interested in joining the Astronomical League.

ALCon 2013 will be held in Atlanta, GA July 24-27.

Early registration ends July 8th.

Printable registration forms and flyers can be downloaded here:
www.astroleague.org/content/alcon-2013-information-downloads
 These can be given out at meetings and events.

The official ALCon website is here:
www.alcon2013.astroleague.org

Respectfully submitted,
 Dan Yanko



Presentation for GEMS Program

On April 20, 2013, I was asked to put on an Astronomy presentation for the University of Waukesha for the G.E.M.S program they do. The University of Waukesha hosts many programs for young girls ages 10 to 13 years of age. They try to promote Engineering, Mathematics and Science to young girls. Jill Roberts has presented these programs in past years.

I had four presentations scheduled but this was changed when one school had to cancel at the last minute. I taught the kids an Astronomy 101 class where they learned what tools they needed to become a beginner Astronomer, how to read star charts and find their way around the night sky as well as some hands on training with some binoculars and telescopes. The kids were very interested in the subject of Astronomy and they all had a great time! I will be presenting again next year!

Sincerely,
 Dan Yanko



In the Astronomical News

Planck: Revising the Universe

The Universe is about 100 million years older than previously estimated and is expanding slightly more slowly; it also has slightly more dark matter and a bit less dark energy than previously suspected. There is no evidence for an additional neutrino-like relativistic particle beyond the three families of neutrinos that have already been discovered; their total mass is not more than 0.23 electron volts, about half the upper limit from the earlier results from NASA's Wilkinson Microwave Anisotropy Probe (WMAP).

Those are the key findings revealed by the most accurate and detailed map of the cosmic microwave background (CMB)—the oldest light in the Universe, dating back to 370,000 years after the Big Bang—produced from the first 15.5 months of data from the Planck satellite and analyzed using one of the world's most powerful supercomputers.

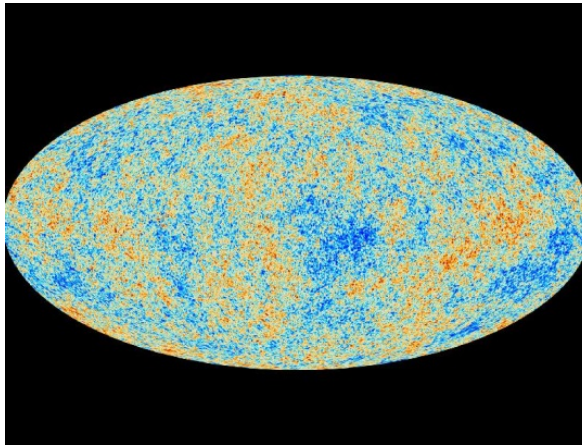
The Planck satellite, designed and built by the European Space Agency (ESA) with significant contributions from the U.S. National Aeronautics and Space Administration (NASA), was launched in May 2009 and began scientific observations in mid-August.

Like its NASA predecessors the Cosmic Background Explorer (COBE) and WMAP, Planck's mission is to map tiny temperature fluctuations in the microwave background radiation bathing the heavens, left from the Big Bang. But both Planck's sensitivity and its resolution are unprecedented.

Planck is 930,000 miles away, on the opposite side of Earth from the sun, in the gravitationally semi-stable L2 libration point where it keeps up with Earth in its orbit. That orbit plus Planck's spinning on its axis allows the spacecraft's 72 detectors to scan

successive narrow (2 arcminutes wide) strips or rings around the heavens, building up a map of rings covering the complete sky twice a year. As Planck measures some 10,000 samples per second, in its first 15.5 months of observing, it has gathered a trillion data points. Analyzing such a massive data set is a monumental computational challenge. So in 2007, before the spacecraft was launched, NASA and the DOE negotiated a formal interagency agreement that provided the Planck mission multiyear access to NERSC.

Especially challenging is the task not only of separating the CMB from the unavoidable instrumental noise and foreground signals



Planck map of the cosmic microwave background shows tiny fluctuations in temperature, which correspond to regions of different densities: denser regions eventually coalesced into today's galaxies and stars. Credit: ESA and the Planck collaboration.

from our Milky Way galaxy, but also of then understanding precisely how well this separation has been done. Using a technique called Monte Carlo simulations, the data were crunched on NERSC's 150,000-core Cray XE6 supercomputer Hopper.

The Planck data reveal that the Universe is 13.8 billion years old, more precise than the previously accepted age of 13.7 billion years. The Hubble constant—the rate at which the Universe is expanding—is revised downward to only 67.80 plus or minus 0.77 kilometers per second per megaparsec (a megaparsec is about 3 million light-years).

Planck's results also indicate that dark energy makes up "only" 69.1 percent (plus or minus 1.0 percent) of the density of the Universe (instead of 71.4 percent as measured by WMAP). Thus, dark matter and ordinary matter make up a heftier 30.9 percent.

by Trudy E. Bell, M.A.

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	25" F/15 Zemlock	Z Dome
6	Henry Gerner	12" LX 200	Tangney Observatory
7	Jeffrey Fillian	14" Z-Two scope	Ray Zit Observatory
8	Kevin & John McCarthy	10" LX 200	Jim Toeller Observatory

At Your Service

Officers / Staff

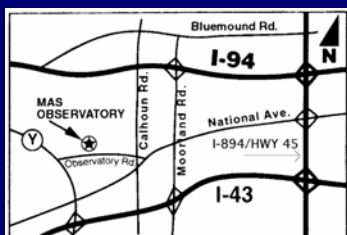
President	Scott Jamieson	262-592-3049
Vice President	Brian Ganiere	414-961-8745
Treasurer	Russell Chabot	414-881-3822
Secretary	Agnes Keszler	414-581-7031
Observatory Director	Vacant	
Asst. Observatory Director	Vacant	
Newsletter Editor	Tamas Kriska	414-581-3623
Webmaster	Robert Burgess	920-559-7472

Board of Directors

Robert Burgess	920-559-7472
Russell Chabot	414-881-3822
John Hammetter	414-519-1958
Gene Hanson	262-354-0138
Lee Keith	414-425-2331
Agnes Keszler	414-581-7031
Tamas Kriska	414-581-3623
Neil Simmons	262-889-2039
Michael Smiley	262-825-3981
Sue Timlin	414-460-4886
Dan Yanko	262-255-3482

June/July/August Key Holders

6/29	Neil Simmons	262-889-2039
7/6	Dan Yanko	262-255-3482
7/13	Paul Borchardt	262-781-0169
7/20	Russ Chabot	414-881-3822
7/27	Brian Ganiere	414-961-8745
8/3	Henry Gerner	414-774-9194



MAS Observatory

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www.milwaukeeastro.org