



Focal Point



January, 2011

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Message from Editors

We are happy to announce that the new editorial office restarted publishing the MAS newsletter, the Focal Point, which has been paused since last April. We are planning to appear monthly.

However, to keep the newsletter alive and more interesting, we will need help from the members. Please send your editors illustrated stories describing instruments, techniques,

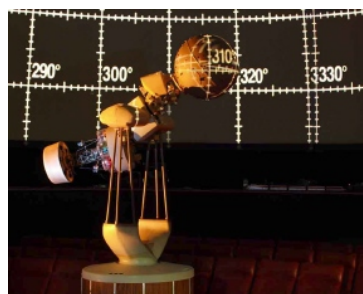
circumstances and the project you were working on. Photos do not need to be a Super High-Resolution Color CCD Seamless Mosaic Image of a Deep Sky Object (although we won't reject it), they simply should demonstrate your astronomical activity. For example: let us know if you built a new telescope or an observatory in your backyard or just simply

took a photo on any astronomical event. You can find an example story on page 3. We also would like to launch an "in the astronomical news" column. Ideally the stories would be connected with your favorite astronomical projects. Once again, we ask every member for submissions to make the Focal Point more colorful. Email at masfocalpoint@miwaukeeastro.org

January Membership Meeting at Charles Z Horowitz Planetarium

According to a tradition kicked off last year the January and February Membership meetings are going to be held at the Charles Z. Horowitz Planetarium located at the Retzger Nature Center, S14 W28167 Madison St in Waukesha. See directions on page 2.

Similar to longitude and latitude on the Earth, astronomy utilizes right ascension and declination to determine

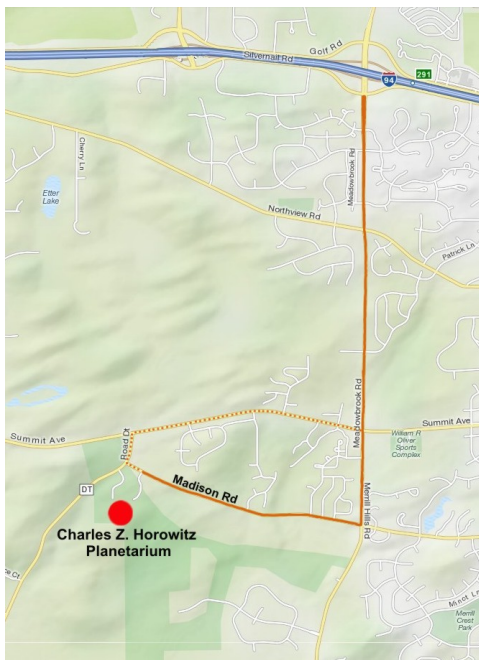


the location of stars and other objects in the night sky. Using the projector and dome inside the planetarium, we will discuss and demonstrate

the use of celestial coordinates and how they are used by both amateur and professional astronomers. We will also demonstrate how to properly align an equatorially mounted telescope and how to use it to locate objects using these coordinates.

So join us for our first indoor star party of the year. Warm weather and clear skies are guaranteed!!

Find the Planetarium



Directions to Charles Z Horowitz Planetarium: take exit 291 off I-94 and go south on Meadowbrook Rd. After about 2.2 miles turn right onto Madison Rd. Drive about 1.2 miles. The driveway to the planetarium will be on the left side of the road.

MAS has a New Phone Number

In an effort to reduce operational costs the board of directors voted to cancel the phone service we had with AT&T and purchase a Tracfone from Walmart which will save us several hundred dollars a year. Steve Diesso volunteered to purchase the phone and set up the service. The new phone number has been added to the website:

(262) 477-6220.



Acknowledgement for Donations

With the membership being lower than just 5 years ago, dues only make up a small portion of what we need to pay the bills. Members who have personally made a financial contribution above the amount of membership dues are:

John Bonow
Russell Chabot

David Deremer
Steve Diesso
Neil Drake
Jim Drzewecki
Brian Ganiere
Gene Hanson II
Chris Hesseltine
Raymond Horvath
Scott Jamieson
Milton Lange

Ian Littlefield
Michael Macali
Joseph Payne
Carl Prerez-Pena Jr.
Gerry Samolyk
Bernard & Marie Sandler
Neil Simmons.

Thank you on the behalf of the Milwaukee Astronomical Society.

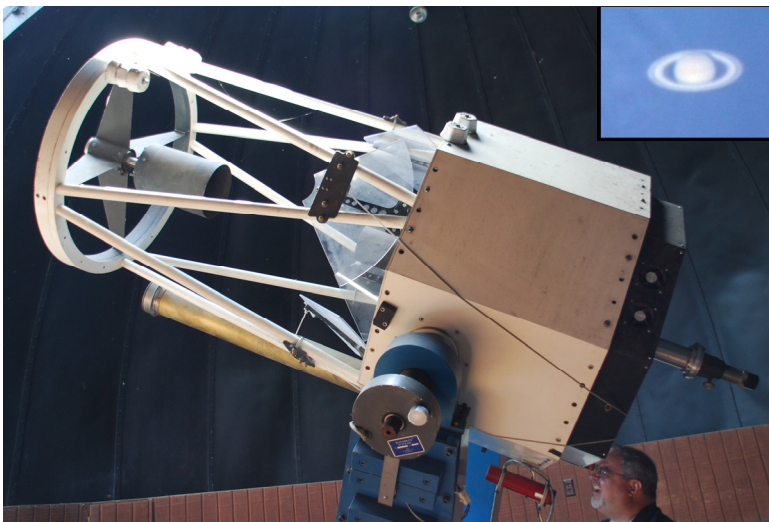
Christmas Party 2010



On December 3rd, 2010 the MAS held its annual Holiday Party at the Observatory. 24 members attended the event. Pizza-soda-beer-cookies were on the menu. Everybody had a great time.

Member's Stories

Daylight Astronomy



On June 6th, 2009 MAS Observatory Director Gerry Samolyk tries to locate the Saturn in broad daylight. He uses an antique 5 inch Clark refractor mounted under the 25 inch, f/15, classical Cassegrain reflector named after Cora Zemlock who was a long time member of the MAS and donated the money for the mirror of that scope. Insert: Saturn in daylight. (Photo by P. Clay Sherrod taken with 0.31m Schmidt @ f/46, Olympus C-3000)

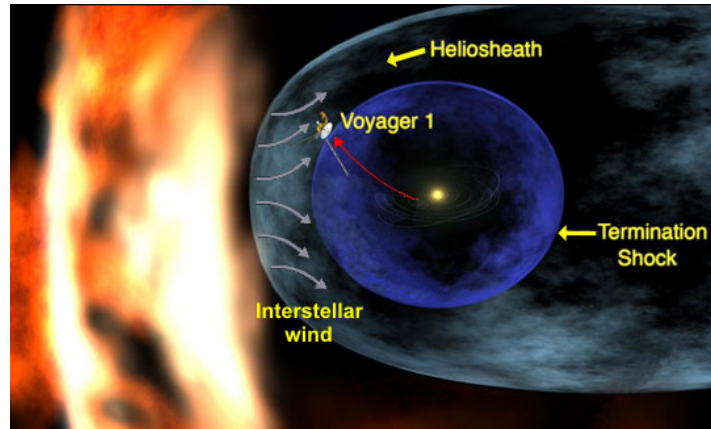
In the Astronomical News:

Voyager-1 is Getting Close to Interstellar Space

The Sun gives off a stream of protons and electrons called solar wind that forms a bubble known as the heliosphere surrounding the solar system. The solar wind travels with speeds of 400 km/s and 750 km/s (slow and fast components, respectively), until it crosses a shockwave called the termination shock. At this point, the solar wind dramatically slows down by its interaction with the interstellar medium forming the heliosheath.

Launched on Sept. 5, 1977, *Voyager-1* crossed the termination shock in December 2004 into the heliosheath. Analysis of data from *Voyager-1*'s Low-Energy Charged Particle Instrument collected since August 2007 showed a steady decrease the of the solar wind velocity of about 20 kilometers per second each year (45,000 mph each year).

In June 2010, when *Voyager-1* was about 17 billion kilometers (0.002 of a light-year) from the Sun has crossed into an area where the velocity of the solar wind has slowed to zero and has remained at zero since then. It is suspected that solar wind



NASA/JPL/JHUAPL

has been turned sideways by the pressure from the interstellar wind.

The event is a major milestone in *Voyager-1*'s passage through the heliosheath, the turbulent outer shell of the Sun's sphere of influence, and the spacecraft's upcoming departure from our solar system. Scientists are refining their models of the heliosphere's structure and should be able to better estimate when *Voyager-1* will reach interstellar space. It is currently estimated that *Voyager-1* will cross that frontier around 2015.

NASA continues its daily tracking of *Voyager-1* with its Deep Space Network. This network measures both the elevation and azimuth angles of the

incoming radio waves from *Voyager-1*, as well as the spacecraft's distance from the Earth.

Although *Voyager-1* is going to run out of electric power around 2025, it will keep heading towards the star AC+79 3888 in the constellation Camelopardalis and in about 40,000 years it will pass it within 1.6 light years.

The Voyager were built by NASA's Jet Propulsion Laboratory in Pasadena, California, which continues to operate the spacecraft. For more information about the Voyager spacecraft, visit: <http://www.nasa.gov/voyager>

January/February Key Holders

1/15	Dan Yanko	262-255-3482
1/22	Paul Borchardt	262-781-0169
1/29	Tim Burrus	262-369-1022
2/5	Steve Diesso	262-641-0331
2/12	Brian Ganiere	414-961-8745

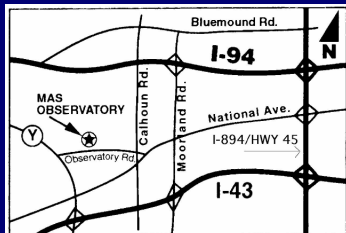
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