FOCAL POINT

The Newsletter of the Milwaukee Astronomical Society February 2000

A New Fixed Observatory Rises

A commitment had been made by the MAS Board to supplant the old C- Shed with a slide - off roof facility housing an excellent 10 inch F6 Newtonian scope.

On Thanksgiving weekend (99), a group of enthusiastic MASers went at it, setting up forms for a 12 foot square slab plus 3 auxiliary 4 foot slabs. The weather continued to hang in there and the cement pouring commenced. MAS almost inherited a cement truck as the driver tried to take a short cut on the hill just south of A scope. A new exit path had to be opened up for the truck behind the fruit trees and the paved road. The poor driver probably needed something to steady his nerves after that encounter.

The weather on succeeding weekends held up, and the fixed frame and 4 inch I-beam rails went up in a couple of days followed by the roof built atop the rails (on wheels yet!). Some of this construction was done inside the heated Quonset house as subassemblies. Then the 2x6 walls were carried out and bolted to the slab. This allowed the crew to avoid being more than semi-frozen.

Lastly, the building has been clad with aluminum siding. A 12 foot bending brake was borrowed for metal cladding beams etc. See the photos on top of page 3. Since the fixed walls are only 4 1/2 feet high , a custom "Dutch door" was fabricated and will be hung shortly to secure the facility.

In parallel with the construction, the Ceola mount is being modified (see photos page 3). Some of this work involved being on one's knees (on the cement slab) dismantling and overhauling bearing assemblies etc. with temperatures ranging from 10 to 25 degrees F. We may have a member who will have stiff knees early in life. At any rate, we should have an excellent new fixed scope with digital readout capability by Spring. A phenomenal job done well ahead of schedule!

Jan. 20th Lunar Eclipse Preserved for Posterity

A die-hard collection of five MAS members braved frigid temperatures to record the total eclipse with an impressive array of equipment. B-scope housed two scopes with special video cameras that recorded the entire event in color and B&W. Also, other scopes were rigged for time lapse photography to get an incremental record.

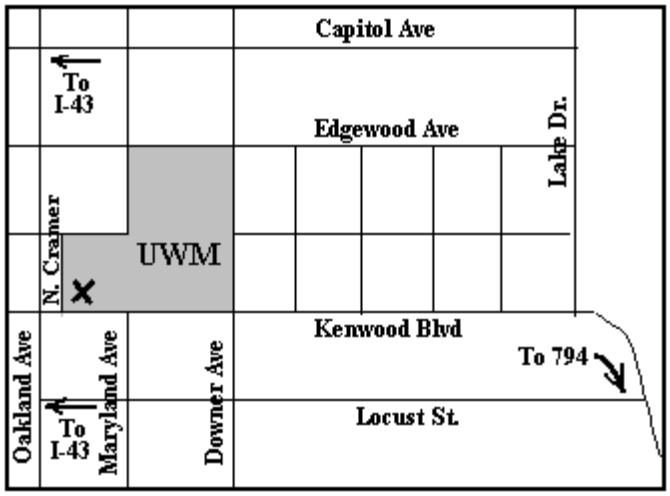
This was done under wind chills of below zero, atop a hill all iced up from construction activities, and still torn up between B scope and A scope. Talk about diehards! Some of these photos should be shown at the next meeting.

We Meet Feb. 18 at UWM at 8:00PM

Once again, we meet at our winter meeting site, the Kenwood Campus of the Univ. of Wisconsin, Room 133 (on the first floor) of the Physics building , located on the corner of Kenwood Blvd and N. Cramer St. - see inset map.

Our featured speaker will be **MAS member, Dan Koehler, whose talk "Three Men and an Observatory"** will review the colorful history of Yerkes Observatory from its beginnings to date. Dan is the advertising manager of Astronomy magazine. He has served on many of his weekends as a volunteer at Yerkes open houses. In turn, this gave him an unusual opportunity to develop the above subject. The talk should be of interest to all ages.

A MAS Board meeting will precede the above regular membership meeting at 7:00 PM. All Directors are urged to be there



Welcome New Members

A warm welcome to new members:

Richard Klimo, Stephen McNeil, Tiffany Lemandski, Tanya Lemanski, Delvin Gross, Brian Lamay, Bernadette DeMuri, and Brian Thomas.

Please do join us at our meetings (such as above) and other scheduled activities and let us get to know you.

On the other side of the coin, older members, please help make our new people welcome

Bits & Pieces

The following items came up during the January meeting.
* MAS membership now stands at 183
*Separate (from the gate key) keys for the C-shed can be purchased by any member but only after going through a checkout on sliding roof and 10 inch scope operation.
* Open house schedules under review. Perhaps fewer, with better preselection of dates for both deep sky and planetary observation (i.e. Partial moon).
* A-scope dome drive has been repaired and is now fully operational.
*The President issued an early call for candidates for the May elections. the offices of President, Vice President, Secretary, and Treasurer are up for election as well as three Directors. Let your interest be known to any officer or board member.

Library News

Two newly acquired books are,
1.The Invisible Pyramid - A Naturalist Analyzes the Rocket Century- by Loren Eiseley-1970. Read this book! Though Eiseley can become poetic in his narrative, he gives a most humanistic perspective on life in this century and its consequences. One of the most enjoyable and thought provoking authors, Eiseley is fun (not to mention disturbing at times).

2. Edwin Hubble- Mariner of the Nebulae- by Gale E. Christiansen-1995. As to the big names: Copernicus, Newton, Einstein, those that changed our understanding of the universe and our place within it, Hubble has made the latest and greatest blow to anthropocentrism. Hubble showed that the even the universe evolves. First, he showed that "spiral nebulae" were, in fact, "Island universes",i.e., other galaxies, by resolving their stars. Red shift measurements proved that the galaxies were receding from the Milky Way with a velocity proportional to their distance. Hence, the universe had a beginning, the Big Bang. This biography recounts E, Hubble's flamboyant and exceptionally interesting life.
Scott Laskowski, MAS Librarian

Observers Corner

Definitely make plans to observe the occultation of 8.9 mag SAO 093783 by asteroid 59 Elpis on Feb 7 at 1733 local time. It features a delta mag of 3.8. The predicted path passes directly over Madison with Milwaukee on the eastern edge. A 6 percent Moon, 75 degrees away will not interfere, but the Sun will have just set. Nevertheless, the brightness of the star makes it a good target.
The February issue of Sky & Telescope has a good article on Planetary occultations for 2000. It list potential minor planetary (asteroids) occultations of stars. It also states observing data requirements that can be used by IOTA (International Occultation Timing Association) in gauging the size and shape of the various asteroids.
Try doing this type of observing. It can be a way of contributing to the science of astronomy and deriving a lot of personal satisfaction with your hobby.

Observer Report - *Lunar Graze*

It is a cloudy Sunday afternoon, Dec. 12th, and at 4:00 p.m. I get a call that the Lunar Graze is on. Clearing skies are forecast just in time for the Graze. This will be the first time I have participated in a graze. About a dozen members of both the Milwaukee and Madison Astronomical Societies meet on a carefully selected stretch of rural highway just outside of Waterloo Wisconsin. As predicted, the skies clear revealing a beautiful crescent moon and the Milky Way.

Next, we set out about 2 miles of cable. There are switches every tenth of a mile along this cable. The switches all send signals back to a main receiving box that times and records all of the data from the twenty stations during the graze.

Now came the exciting part. I was dropped off at a switch with no one else in sight. I had my telescope set up in a flash and had a good 20 minutes to go before the graze. There was a chance that my lens would frost over, so I kept the lens cover on until just before the graze. This gave me time to lay back in the grass and peacefully enjoy the night sky.

Soon the pressure was on. With a few minutes to go before the onset of the graze I began to concentrate on the faint star that was about to pass through the mountains on the edge of the moon. I waited and waited not knowing what to expect. Then suddenly the star disappeared. I quickly depress my switch. A short time later it reappeared and I release my switch. Again it disappeared and reappeared. Finally it disappeared a third time for a very long time. I thought I had lost it but finally it was there again. The graze was over.

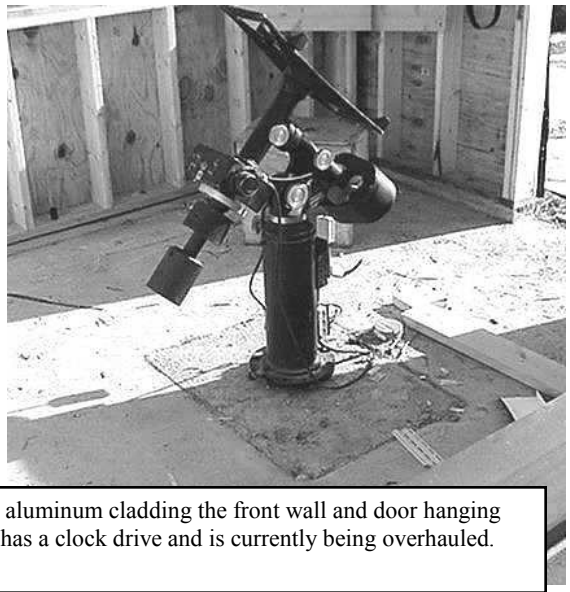
It was not easy, and I am not sure if I had the timing right on the last reappearance. It took a lot of concentration. I hear that when a brighter star is grazed, it is much easier to observe.

The goal of this exercise is to map out a very detailed sketch of the mountains on the edge of the moon. Because we are spread out over a 2 mile area, we end up with very good resolution.

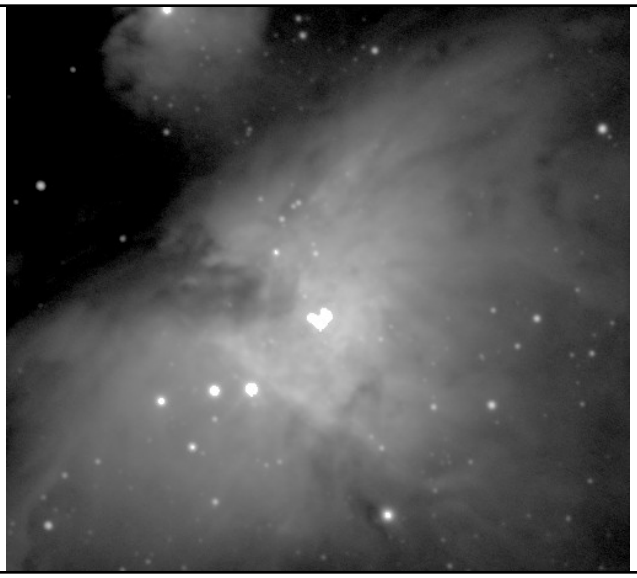
Unfortunately there was a paper jam in the main recording machine. All of the data was lost. In spite of this unfortunate development, I still enjoyed the experience. We are fortunate to have a club with all of the equipment needed to carry out this kind of observation. As a club, we have 2 miles of cable with switches, a trailer for the cable, a recording box, and 12 portascopes specifically designed for grazing occultation observing. The most important thing that we have is people who have the knowledge and expertise required to use the equipment and have a successful graze observation.

The next time you see a lunar graze announced, mark your calendar and try to make it. It is quite an experience.

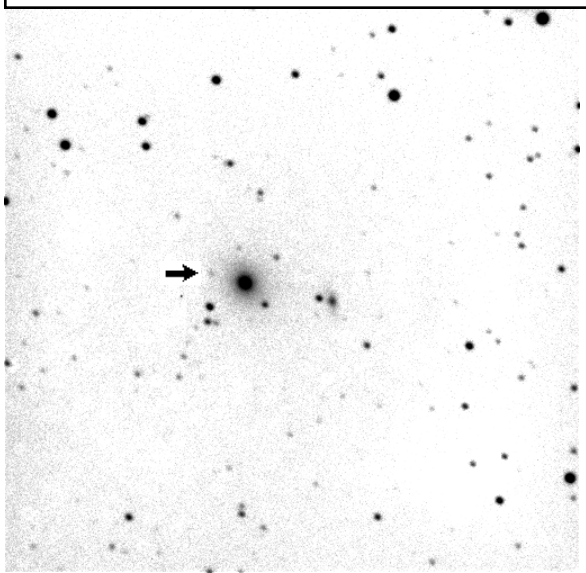
Carlos Garces, member, MAS

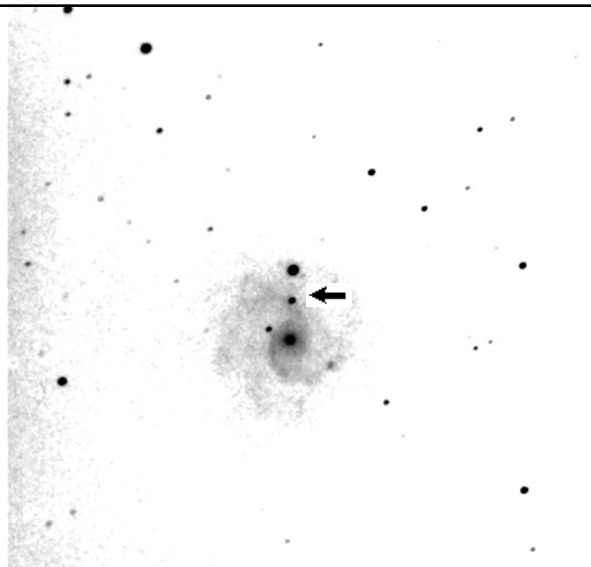


C Scope, Roll-off roof observatory rapidly approaches operational status. Only aluminum cladding the front wall and door hanging remains. Shown at right is the modified Ceola mount on an isolated pad. The mount has a clock drive and is currently being overhauled. Planning is in progress to add digital readouts for RA and Dec.



ST9/B-scope images of M1,Crab Nebula (left) & M42 Orion Nebula (right). Note the detail of the gaseous "wisps" in the Crab. The Orion nebula was shown in the Jan issue of Focal Point thru Z-scope.Trapezium is the central cluster. This more expanded view of the nebula is possible because of B-scope's shorter focal length. *-Images by G. Samolyk*





More supernova (SN) images. At left is shown the SN in NGC 2986 and left, in NGC 3184 (see arrows). These are a small sampling of currently observed SN's. *Images by G. Samolyk*

MAS Officers/ Staff

President	Scott Jamieson	896-0119
Vice President	Lee Keith	425-2331
Treasurer	Dan Yanko	453-3382
Secretary	Margaret Warner	327-7427
Observatory Director	Gerry Samolyk	529-9051
Assistant Observatory Director	Paul Borchardt	781-0169
Focal Point	Rudy Poklar, Editor	786-8931

Future MAS Events

May 19 Election of Officers and three Board members

MAS Membership is open to all with an interest in Astronomy and expanding their knowledge of the Universe.Yearly Membership Dues are: Individual $28/yr.; Family $32; Non-resident (individual $18, Family $22);
Student (under 18) $12. **For more information, contact Membership Chairperson Julie Frey, 11040 W. Meinecke Avenue, Milwaukee WI.**

Focal Point Publishing Guidelines
Focal Point Newsletter is published monthly from Sept through May with a Mid-summer issue in July. Articles, Announcements, Graphics, Photos, Swap/Sale Ads etc. should be submitted at least 10 days prior to the first of the month (of the desired issue).Article inputs are preferred via E-Mail, or diskette in a text or Word compatible format, if possible. Submit FP inputs to:

MAS Focal Point c/o Rudy Poklar
12905 W. Crawford Drive

Saturday Keyholders

February

5	Tim Hoff	662-2212
12	Scott Jamieson	896-0119
19	Lee Kieth	425-2331
26	Dan Koehler	662-2987

March

4	Scott Laskowski	414-421-3517
11	Rudy Poklar	262-786-8931
18	Jill Roberts	262-427-4495
25	Terry Ross	262-784-1674

April

1	Gerry Samolyk	414-529-9051
8	Tom Schmidtkunz	414-352-1674
15	Neil Simmons	414-889-2039
22	Chris Weber	262-789-7128
29	Dan Yanko	414-453-3382

** If members want to be assured of observatory access on a given Saturday nite, they should call the keyholder ahead of time.*

Loaner Telescopes (available to members for local use)

Scott Jamieson (Waukesha)	896-0119	4 ” f / 1 5 refractor
Lee Keith (Franklin)	425-2331	8” Dob reflector
Rich Sterle (Greenfield)	543-7479	8” Dob reflector

MAS Observatory 542-9071

The Milwaukee Astronomical Society
2933 N.68th Street
Milwaukee, WI. 53210-1208

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We meet at 8:00PM, UWM Kenwood Campus on Friday, Feb.18, 2000 - Featured speaker will be Dan Koehler on the History of Yerkes Obser vatory.