

## 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



*Completion of the Jim Toeller observatory in 2007*

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.

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.

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