

Focal Point



Newsletter of the Milwaukee Astronomical Society

January & February 2005

Founder Member Award

I would just like to thank everyone for my Founder Member award. Thanks to Chris for coming up with the idea, to Bob for the presentation, and to Sue for her design work on the award. The other awards were well deserved. Gerry and Scott have each contributed a great deal to the MAS. Gerry has been tireless in his drive and dedication. His level of commitment inspires others. Scott did a great job as president, and is now working on one of our most significant projects: finding a darker site for an observatory.

I think we have what we need to make this society thrive in the future. Thanks, Tom Schmidtkunz

An Old Friend: Film Astrophotography

by Tom Schmidtkunz

It is true that CCD cameras offer some of the best ways to image the night sky. Very efficient and powerful, they greatly extend our reach out into the universe. They make decent imaging possible from poorer sites; great news for those of us living near larger cities.

Lately, I've been getting back into film imaging also. There are some things it is very good for. The entry cost of film imaging is very low. One could buy a used manual camera for about \$100, piggy back it to your scope, and get great color pictures relatively easily.

The night of November 7th provided an unexpected opportunity to take some prints and slides when the Northern Lights put on a spectacular display. I was able to get quite a few shots, taken from my front yard, with just a manual camera, a tripod, and cable release. Anyone can handle this technology. I shot 400 Fuji Print and 400 Fujichrome slide film. Taking a wide range of exposures, and shooting at f/1.8, I found that 20 seconds of exposure captured the best of the veil type structures, and exposures to 40 or 50 seconds were decent as well. When you image a moving object, like aurora, a long exposure will wash out details since the exposure covers the movement of the aurora. That's why if the aurora are very bright and detailed, I prefer 20 seconds exposure or less to capture fine detail. I have seen many fine veil structures up in Door County, overlooking Green Bay. Sometimes, just going a few degrees north really enhances your chances of seeing something worth while.

I have also been getting into astrophotography through the telescope and with telephoto lenses. I've purchased a few lenses that are made with special ED (extra low dispersion) glass which offer superior sharpness and color correction by minimizing chromatic aberration.. I hope to get some decent examples in

time for my April talk at the MAS on this subject.

About a year ago, I had a chance to pick up a quality 4" refractor and a Losmandy GM-8 mount. I am still learning a lot, but I can say that the mount is very accurate. I have taken 10 minute exposures with no added drive correction, and the images only show a slight amount of tracking error. I should be able to guide this out easily. There is also periodic error correction (PEC) on this mount, which will allow the mount to compensate automatically for drive inaccuracies. I am learning how to best use this.

My next projects will involve using two new lenses: a Nikon 180 f/2.8 ED, and a Nikon 300 f/2.8, both of which have a fine reputation. I have a mounting plate on top of the telescope tube to which can be attached camera and lenses. I will then guide through the telescope, using a guiding eyepiece, and making corrections as needed. For wide angle views, I won't have to guide at all, because the drive errors will be small.

Many people have done spectacular things with these types of lenses and CCD cameras, especially when used with a hydrogen alpha filter. Perhaps this is something I can try down the road. That's one of the neat things about this. You never get 'done'. There are always more intriguing projects out there to do.

I enjoy observing with the telescope a great deal. There is something about seeing a real image now that is striking in a way an image cannot be. But imaging has its own appeal. A 50 mm lens can take a picture of Barnard's Loop in 5 minutes under a decent sky. And of course, both film and CCD camera store up the faint light from our subjects.

Another plus about film imaging is that after you've obtained the images, you can scan them into your computer and then use all the processing tools you would on a CCD image. That's what I plan to do here. I'll take 4 – 10 images of a field, scan them and combine them for a final image. Many people have used Photoshop to do this. Maxim DL is also an excellent tool, especially the latest version.

Lastly, a word about f/ ratios. My 4" refractor is f/6. It does a great job on subjects like M45, Double cluster, M11, etc. For things that have extended faint areas like M31 or M8, a faster optical system works best. I have found that f/2.8 – f/4 is a sweet spot for A/P. F/6 or so is fine for some objects, but not others.

It's true that is colder out now, but there are many fine objects awaiting your study. Imaging is great fun, but addicting. People sometimes ask: why bother imaging, when you can look in a book or on the internet, and see images more fabulous then you could ever take. Fair question. The way I think of this is that it's one thing to climb a mountain, and stand on the peak, and it's quite another thing to read about someone else doing it in a book. Plus images are like a travel log of all the cool places I've been to.

When people boast that they've been to Florida or Europe, you can say, well, I've been to M74.

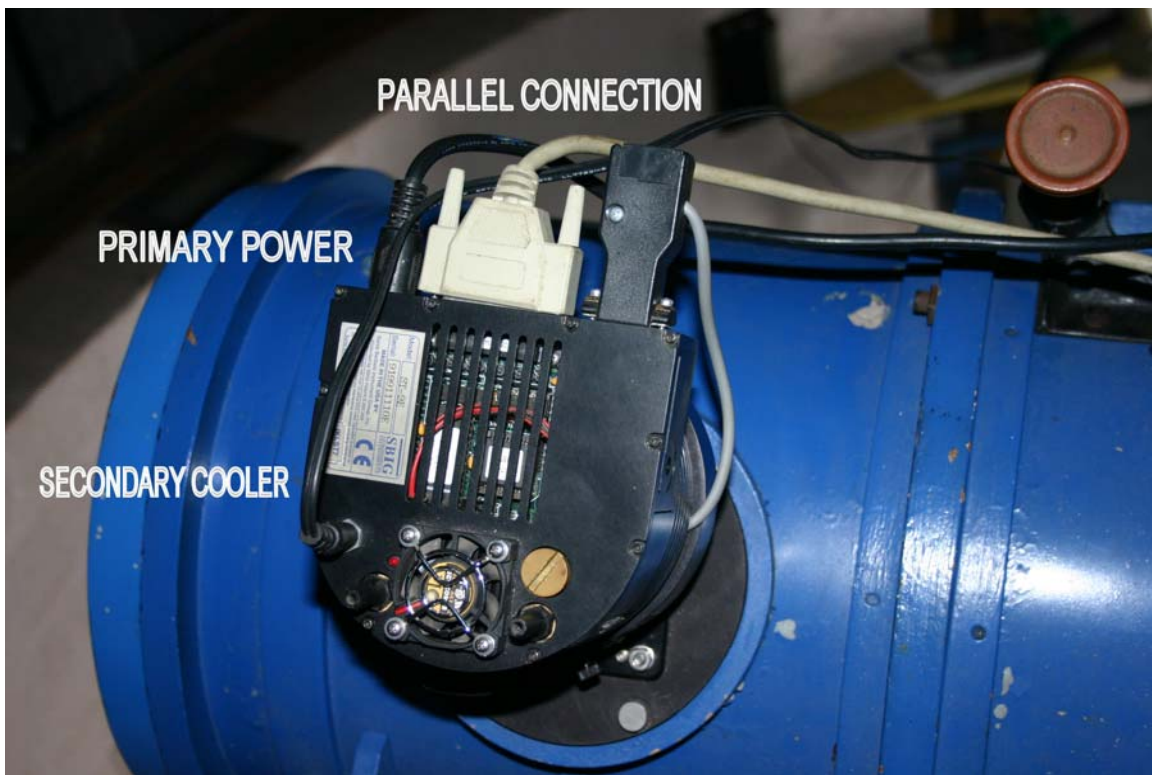
Observatory Notes

By Gerry Samolyk

CCD Equipment

Several times in the last few months, I found the primary power to the CCD camera on B scope disconnected with the secondary cooling transformer connected. Running power to the secondary cooling circuit without the cooling fan running can burn out the cooling circuit on the camera. I have heard from Santa Barbara Instruments that this is the number one cause of repair for these cameras.

Fortunately, the power to B scope is cut with the main breaker in A building so no damage has occurred. The MAS has invested thousands of dollars in our CCD equipment. To avoid damage to this equipment, please review the manual or contact the observatory director for instructions on using the equipment. The photo below identifies the cables connected to the ST-9 camera on B Scope.



'C' shed keys

There have been many keys issued to members for the Albrect and Weisen observatories. I have not seen many of you for years. If you have a key to these buildings and find that you do not use it, please return it for your deposit.

Winter Heating Rules

We are now in the cold part of the winter. Make sure that you keep the doors to the rest rooms and dark room closed. These rooms are electrically heated to protect the pipes from freezing. Keep in mind that when using the electric heat in the "Z" building, the down position for the circuit breaker is ON and up is OFF. Make sure that the heat is off before leaving the observatory.

Scopes for Sale

A 6" f/8 telescope had been donated to the MAS (see photo). The Board has decided to put the scope up for sale.

A second scope is also for sale. It's a 60 mm refractor with a 900 mm F.L. Included is a tripod with an equatorial mount (no clock drive).

If you would like to make an offer on either telescope, contact me at: samolyk@ix.netcom.com. The proceeds will go to the Albrect fund.

I would like to give our members the first shot at these scopes. If none of our members are interested, we will post these scopes on Astromart.



Library News

by Scott Laskowski, MAS Librarian

Rainbows, Halos, and Glories by Robert Greenler - 1980

When you open this book you will be treated with an original and cheerful surprise. The author's autograph is unique and personal. Mr. Greenler is a retired Physics professor from UW-M and has lectured to the MAS on previous occasions about atmospheric phenomena. He was the first to photograph the infrared rainbow. "I saw for the first time an infrared rainbow that had hung in the sky, undetected, since before the presence of people on this planet", he once said.

Robert Greenler says the atmospheric effects described in the text can be visible once in three days if people only looked at the sky. I asked Mr. Greenler, "How long does a typical solar halo, rainbow, sun dog or pillar last?" "Only as long as it takes to put film in your camera," was his humorous reply. Meteorology and the daylight sky can be as interesting as the night sky if you know what to look for and wonder why. Illustrated with beautiful photos and technical diagrams, it will wet your interest at any level. (Donated by Mary Ann & Virgil Tangney)

New Members

By Carlos Garces

Mr. Andrew Little and Family, New Berlin

Mr. John Pilarski, Milwaukee

Mr. Jim Gehrke and Family, Milwaukee

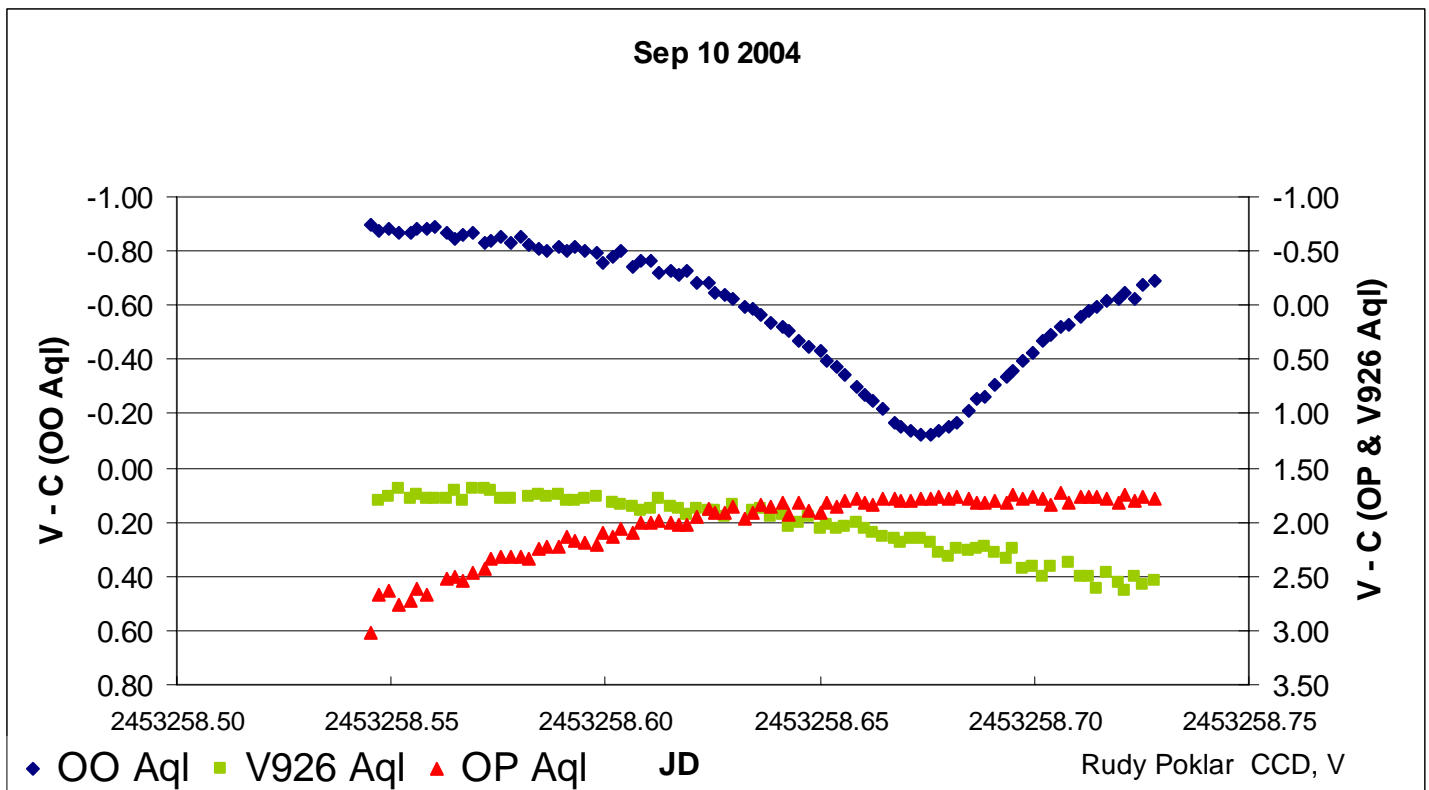
Rudy Records a Triple Play

By Gerry Samolyk

Last Sept, Rudy Poklar did a CCD run on the eclipsing star OO Aquila. During the run he noticed that there were two additional eclipsing stars in the field. He ran photometry on all three stars and found that all three were in eclipse at the same time.

While OO Aql is relatively bright (9.2 – 9.9 mag.), the other two targets are much fainter. OP Aql is listed as 12.2 – 14.6 with an orbital period of 3.228 d and V926 Aql runs from 13.8 – 14.6 with a period of 2.973 d.

This is the first time I've seen anyone record three eclipses in a single CCD run.



For Sale

Questar 7 with equatorial cradle and folding pier- \$6000.00

Richard Goldberg 6855 N. Elm Tree Rd.

Glendale, WI 53217 414 351 0250

E-mail: isidore@wi.rr.com

MAS Officers / Staff

President: Bob Manske (608) 849-5287
Vice President: Steve Diesso (262) 641-0331
Treasurer: Chris Weber (262) 789-7128
Secretary: Henry Gerner (414) 774-9194
Observatory Director:
Gerry Samolyk (414) 529-9051
Assistant Observatory Director:
Paul Borchardt (262) 781-0169
Focal Point: Jerry Bialozynski (262) 895-7461

Upcoming MAS Events:

MAS Membership is open to anyone interested in Astronomy who wishes to enrich their knowledge of the Universe.
Yearly Membership Dues:
Individual \$34/yr, Family \$40, Non-resident (individual \$22, Family \$40), Student (under 18) \$16. For more information, contact Membership Chairman, Carlos Garces, 16430 Melody Drive, New Berlin, WI. 53151.
Phone: (262) 786-2623 Email : cgarces@wi.rr.com

Focal Point Publishing Guidelines
The "Focal Point" is published bi-monthly (Jan, March, May, July, Sept, Nov). Articles, Announcements, Graphics, Photos, Swap/Sale Ads etc. should be **submitted at least 10 days** prior to the first of the month (of the pending issue). Article inputs are preferred via email in a Text or Word compatible format. Submit Focal Point inputs to: focalpoint@bialozynski.com

Saturday Night Key Holder:

January
1 Gerry Samolyk (414) 529-9051
8 Tom Schmidtkunz (414) 352-1674
15 Lana Silke (262) 966-4929
22 Neil Simmons (262) 889-2039
29 Chris Weber (262) 789-7128

February
5 Dan Yanko (414) 453-3382
12 Jerry Bialozynski (262) 895-7461
19 Paul Borchardt (262) 781-0169
26 Tim Burrus (262) 548-6372

March
5 Steve Diesso (262) 641-0331
12 Brian Ganiere (414) 961-8745

Loaner Telescopes (available to members for local use)

Lee Keith (Franklin) (414) 425-2331 8" Dob reflector
Scott Jamieson (Waukesha) (262) 896-0119 8" Dob reflector
Paul Borchardt (MAS site) (262) 781-0169 6" Dob reflector
Chris Weber (New Berlin) (262) 789-7128 8" Dob reflector

MAS Observatory (262) 542-9071

MAS Web Page: www.milwaukeeastro.org

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Wind Lake, WI 53185-5516

ADDRESS CHANGE SERVICE REQUESTED

Next Board & General meetings of the MAS will be held on **Jan. 21 & Feb. 18.
*The Board will meet at 7:00 PM, the General Membership Meeting will follow at 8:00 PM at the **UW-M.***

