



The Newsletter of the Milwaukee Astronomical Society

October 1999

MAS Buys New CCD Imager

The Board of Directors approved the purchase of a second CCD imager, The new ST9E from Santa Barbara Instrument Group (SBIG). The present ST6 was receiving a lot of use and was frequently tied up. The beauty of the new purchase is that it is specifically designed for long focal length (100 inch plus) telescopes such as our three permanently installed units (A, B, & Z). It is even a more sensitive device than the ST6 due to two stage cooling, and significantly better pixel sensitivity over a broad spectral range. The contained sensor is a 512x512 pixel array with 20 micron pixels. The field of view will be closer to 20x20 arc minutes (as opposed to 10 for the ST6). Although the pixels are similar to the ST6, they represent only a 1.6 arc second in a field of view(optimal) in a long (100 inch plus FL) scope. The CPU and other processing electronics, as well as the two stage cooling, are all contained in the optical head that attaches to the scope. Hence, there is a simpler connecting scheme with a single cable directly to the computer.

The Board has also authorized the purchase of a separate computer/monitor to be used with the ST9E.

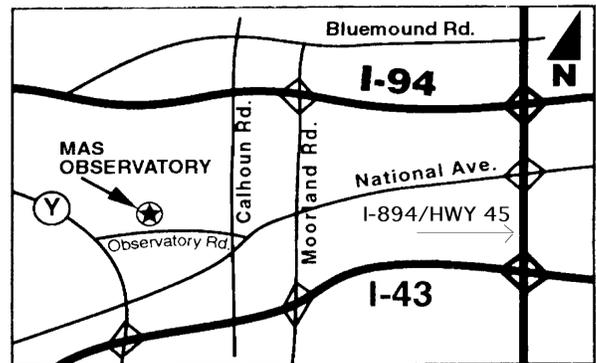
It is anticipated the new unit will more readily image down to 20th magnitude stars on good seeing nites. Move over Hubble...we're gaining ground!

Eds Note: If your interested in more details on this marvelous machine, you can get the complete story from SBIG's Web site at: www.sbig.com

MAS Fall Campout Oct. 8 & 9

This is front page reminder to all to try giving the MAS Fall Campout a shot this year. It's being held again at the Greenbush (North Unit) Kettle Moraine State park (see map inset).It's a great time of the year and Paul Borchardt is planning to have extra scopes available including the Weisen 18 inch Dobsonian (made by Obsession).more importantly, sharing the company of fellow astronomers around the campfire is a lot of fun. During the day, fall colors should on display

Remember, you don't have to be a camper to participate. It's only an hours drive from the Milwaukee area and guests are welcome as well. The campsites are paid for by MAS, but a State Park sticker is needed to enter. For more info, contact Paul Borchardt at 781-0169 or email at pjb924@aol.com.

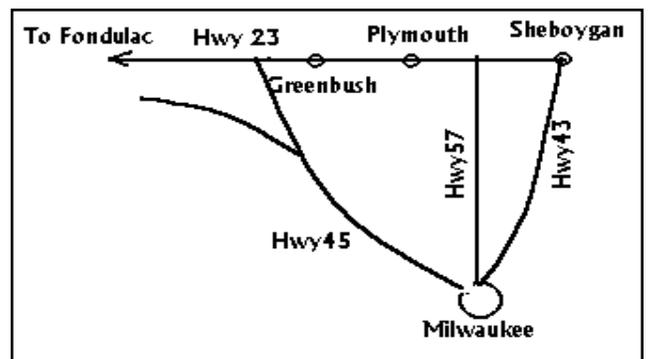


We Meet on Friday Oct. 15 at 8:00 PM.....

at the MAS observatory for our regular monthly session. Our Speaker will be our own President who will discuss **MAS experiences with CCD imaging, some of the advantages over conventional photography, site considerations etc..** Scott brings a fair amount of CCD imaging experience t the meeting. Not only has he been an active user of the ST6 CCD but he also built his own CCD including the circuit boards. He has frequently demo'd this home built unit at open houses. This talk should be of interest to all....bring family and guests.

The MAS Board will meet prior to the above regular meeting at 7:00PM. With all the new the new developments taking place, Directors are urged to be there.

**Last Call for Membership Renewal
Get those renewal cards and checks in
a.s.a.p.**



Board Doings

The following items of interest were addressed at the September 17th Board meeting.

* An expenditure of \$3900 was approved to acquire Santa Barbara Instruments Group's new ST9E CCD imager. This Camera has 512x512 pixel array, larger pixels, two stage cooling, and is specifically designed for long focal length scopes such as MAS's three permanently installed scopes.

This device provides a field of view twice that of the ST6 with a significant increase in sensitivity (see article elsewhere).

*An expenditure of up to \$1000 was approved for a dedicated computer/monitor to be used with the ST9.

* The construction of an outdoor housing with slide off roof was authorized. This unit will house the donated 10 inch Ceola telescope. It is hoped that this can be achieved before the snow flies this year. This would provide all members who have purchased an MASS yard key, access (after training) to an excellent cassegrain telescope without need to enter the permanent facilities..

* A library budget of \$300 was approved for the coming year.

*A first class mailing of the Focal Point was authorized to allow mailing of membership cards directly to new and renewing members along with the FP. This will take place at the end of October (November issue FP). This should cover the majority of active members by this time frame.

*Yerkes Observatory

The Univ. of Chicago still operates the largest refracting telescope in the world. Being in Williams Bay, WI, it is a must see for MAS members. Free public tours are given every Saturday at 10:00AM, 11:00AM, and Noon. To reach Yerkes, take I-43 south, exit Hwy 67 south, on west 67 in Williams Bay. A wonder of the modern world, Yerkes is a little known landmark in the history of science right here in southeast Wisconsin. Members Scott Laskowski and Dan Koehler volunteer at this facility

Astronomy Calendars

Astronomy Magazine calendars, for the year 2000, are on sale at regular monthly meetings. See Scott Laskowski.

The Star in question is RZCap. This is a RR Lyr type star

Observer Report *Variable Star Observation - RZCap*

(RRab to be exact). These are pulsating variables similar to cepheids but with shorter periods, usually less than a day.

This particular star has no period listed in any catalog. A preliminary period was produced from visual observation by the RR Lyr committee chair, Marv Baldwin. Using our MAS CCD, two light curves were obtained in July and August. The goal is to confirm and refine this period.

The small hump (about 0.3 magn) before the maximum peak (see lower left graph) is an interesting by-product of this research. The significance of this feature has yet to be determined. We hope to get a paper published when we have enough data.

There are 20 similar stars that Marv has under study. To date, the MAS has obtained data on this star plus one other, VWCap.

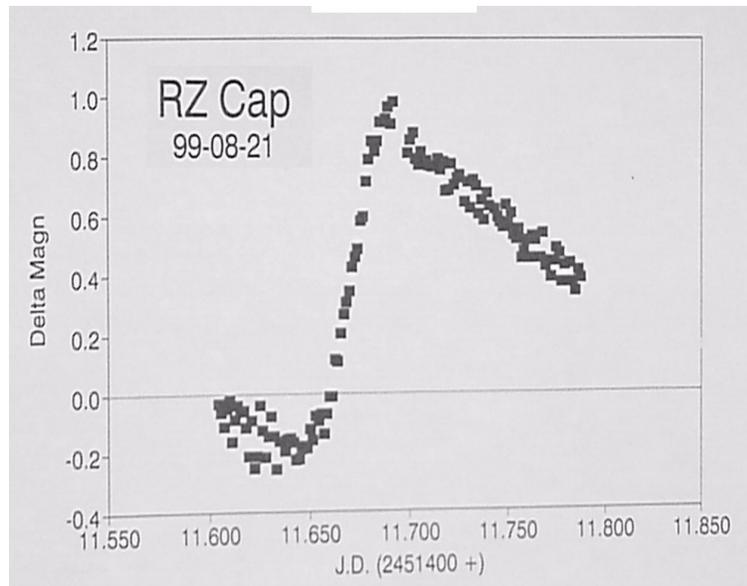
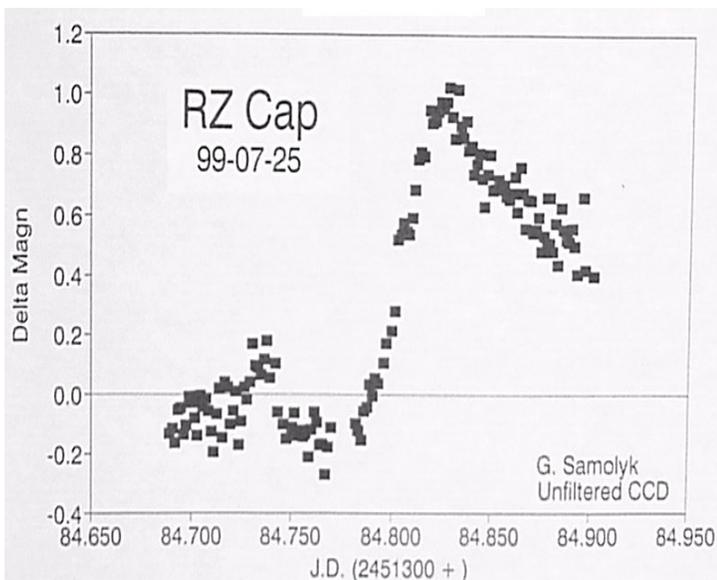
-Gerry Samolyk

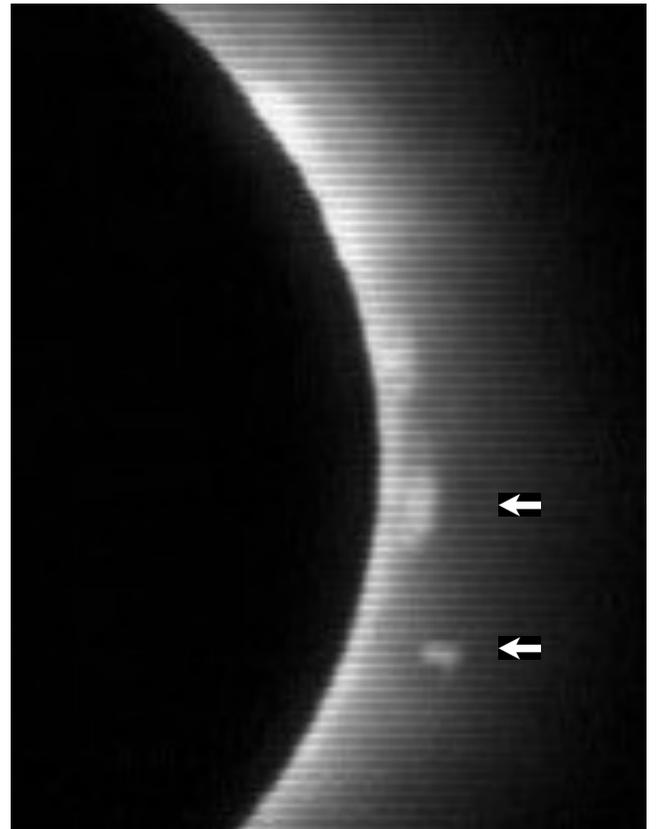
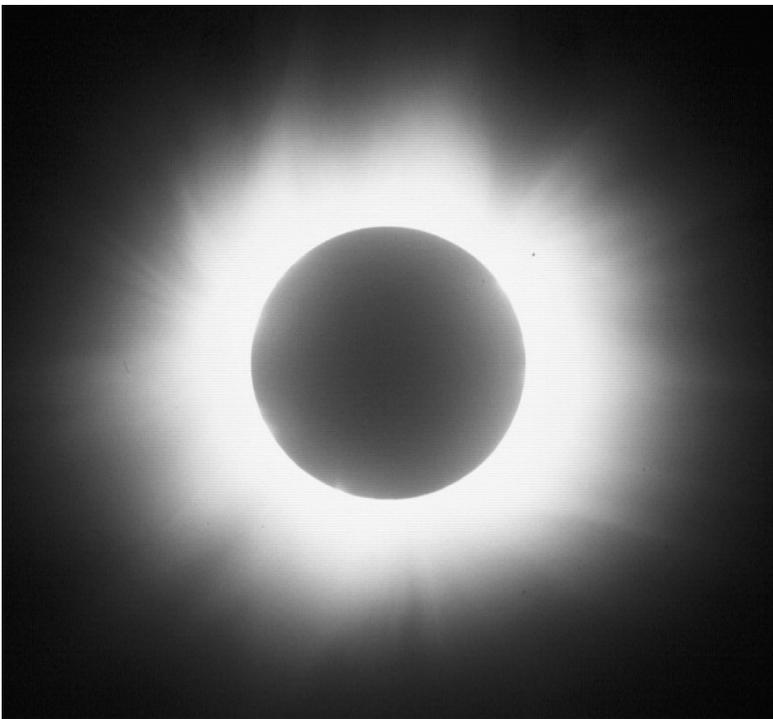
Eds Note:

Gerry is one of roughly 550 VSO observers worldwide. VSO observing, both visual and CCD imaged, is one of the areas where amateur astronomers can truly contribute to the science of Astronomy by mapping the variability of several classes of stars. Gerry, who is also our observatory director, is always willing to teach and/or train VSO observers.

If you have access to the Web, you can also find out more on the subject. The site, run by the American Assoc. of Variable Star Observers (AAVSO), can be found at:

<http://www.aavso.org/>





The September MAS Meeting featured Observatory Director Gerry Samolyk (upper left) discussing his August trip to Europe to photograph the 1999 solar eclipse. An attentive audience (partially shown, upper right) enjoyed both his travelog of Europe and outstanding color slides of the total eclipse, taken in Hungary. The photo on the lower left shows the Sun's corona at totality, while the photo on the lower right shows some prominences (arrows) extending thousands of miles from the surface.

Ed's Note: Apologies to Gerry; his excellent slides went thru a Color slide to JPEG scan to grayscale to bitmap conversion. (not o mention the print process) . This sequence lost some of the subtle shadings and data of the original photos.

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

Greenbush (North Kettle Moraine) Campout Oct. 8 & 9

Saturday Keyholders

October

2	Lee Keith	425-2331
9	Dan Koehler	662-2987
16	Scott Laskowski	421-3517
23	Rudy Poklar	786-8931
30	Jill Roberts	427-4495

November

6	Terry Ross	784-2093
13	Tom Schmidtkunz	352-1674
20	Neal Simmons	414-889-2039
27	Chris Weber	789-7128

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

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

PLEASE NOTE: The above keyholder list reflects additions and deletions to previous lists. Please discard any prior list.

MAS Observatory 542-9071

The Milwaukee Astronomical Society

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***Main Talk**

- New Directions with CCD Imaging - Scott Jamieson
-October 8, 9 MAS Campout at Greenbush

