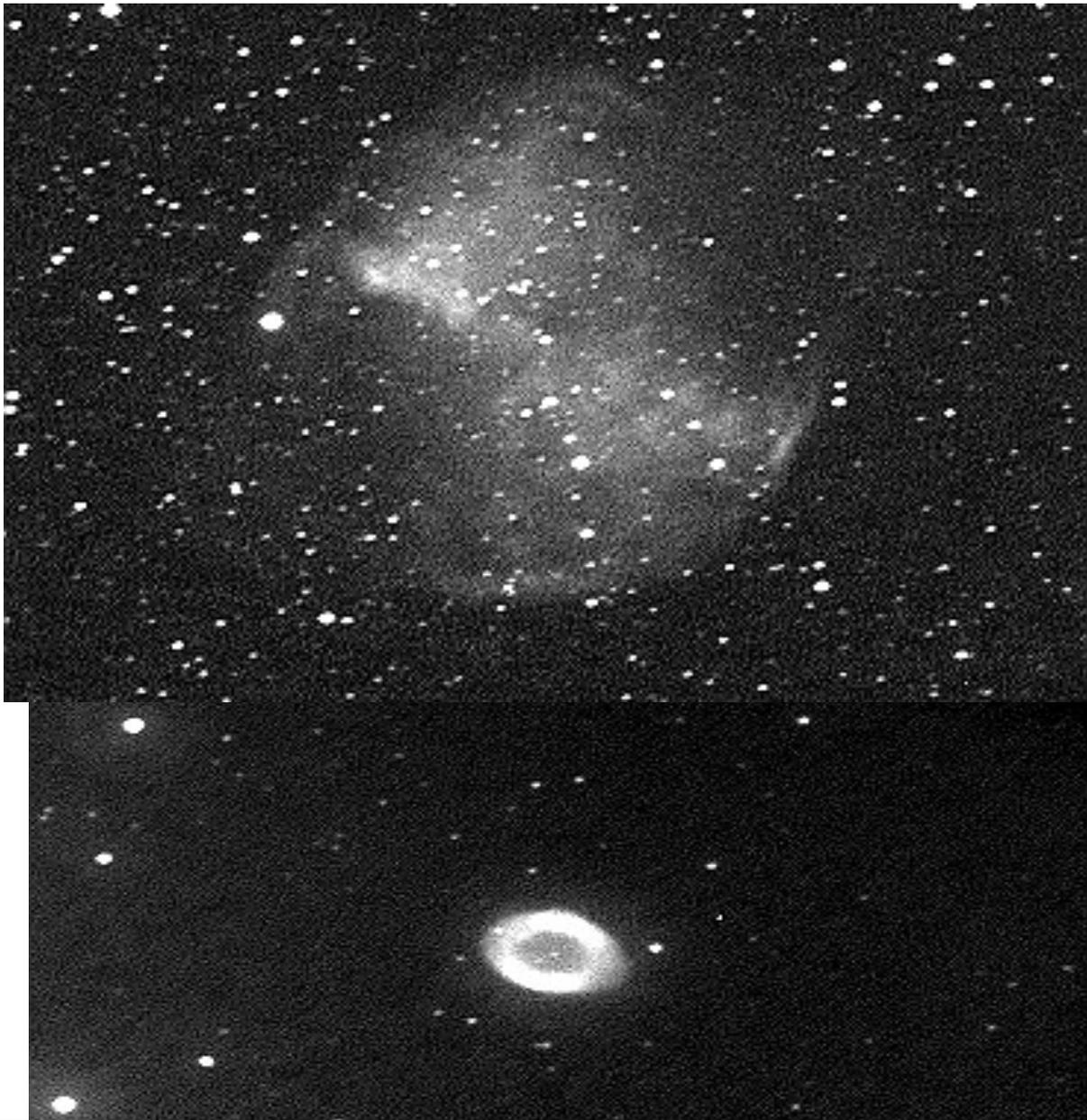


FOCAL POINT



The Newsletter of the Milwaukee Astronomical Society

September 1998



Images of M27 Dumbbell Nebula in Velpecula (top) and M57 Ring nebula in Lyra (bottom) recently taken with the clubs new SBIG ST-6B CCD Camera on MAS's 12" A scope. Each image was a 100 second exposure consisting of ten 10 second exposures sequenced over the total time period. The technique minimizes minor scope tracking errors by digitally re-registering the 10 second frames for the 100 second period. The central star in the ring (M57) is about a 15th magnitude. The images have not been optimized and may lose some definiton in the repro process.

From The President

The Changing Observatory Scene

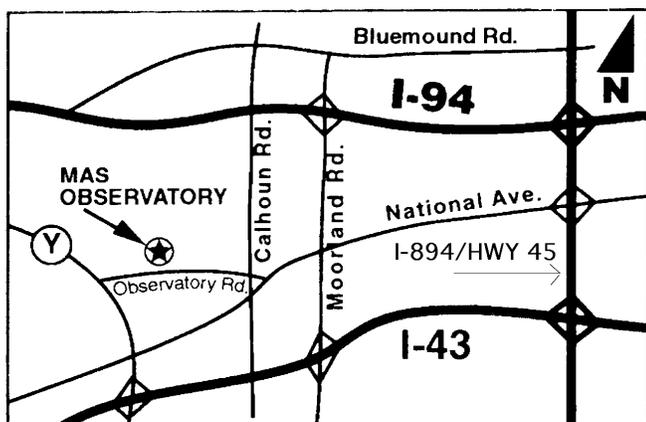
Announcing first light in our new St6 CCD camera, and it's a delight to use! The images on page 1 were taken by Gerry Samolyk and I on our second night of experimenting with the camera and learning the software. The camera was mounted on A-scope for both pictures and no additional guiding was used. One of the neatest features of the software is the ability to automatically take many exposures and align and add them together. This is called Stack&Track. The images are 10 exposures, 10 seconds each. Note the two central stars in the Ring nebula. The brighter of the two is only 15th magnitude! The biggest advantage of CCD cameras is the ability to subtract out a large part of the light pollution which will dramatically improve the range of objects we can study from our New Berlin location.

In addition, we have received the new focuser for A-Scope and it also works very well. The Digital setting circles have arrived and I am working on getting them installed. They will be able to read out the co-ordinates of the telescope and, with its' 10,000 object data base, we will be able to find faint objects more easily. This will be of great advantage to people like me (and most people I know) that have always had difficulty finding and identifying faint objects. Another great feature is the ability to interface the circles to a computer displaying star charts from THE SKY software and have the computer show you where the telescope is pointed and all the objects in the area.

COME ONE, COME ALL !!

Because of the dramatic capability of these tools, we have decided to dedicate our September general meeting to demonstrating the improvements made this year to the clubs equipment. Gerry S. will be talking about the CCD camera and setting circles (If I can get them installed in time.) and I will discuss the changes to Z-Scope. Many of you members haven't been out to New Berlin in a long time and I would like to invite you let us show off this new capability. These improvements were NOT made for a just a few people! Over the next few months we will be generating video tapes on using this equipment and invite any members willing to learn to join us in exploring the universe from a new perspective. Learning this equipment does take some effort but it's really worth it! Don't forget - September 18 th!

Scott Jamieson, MAS President



We Meet again, Fri., Sept. 18, 8:00PM 2

MAS starts its new season with a **general membership meeting** at the above time and place (see Map on lower left). The general meeting will review all of the developments and observatory upgrades that have transpired in the last few months. These exciting upgrades are providing members with capabilities we could have only dreamed about a decade ago. The "after the meeting program" will feature demos of the computerized Z scope, CCD imaging with samples of recently acquired images, possible "real time" imaging if weather permits and highlighting discussions of digital readouts for A & B scopes. If you want to be in on the ground floor on the use of renovated facilities, this is it!

Other MAS September Activities

First Wednesday meeting Sept. 2 at 7:30PM.

Final plans for the Aldebaran Graze trip, Sept. 11, 12, plus pick Gerry's brains on new Observatory equipments and other observing subjects.

First Saturday Nite Session, Sept 4, sundown til?

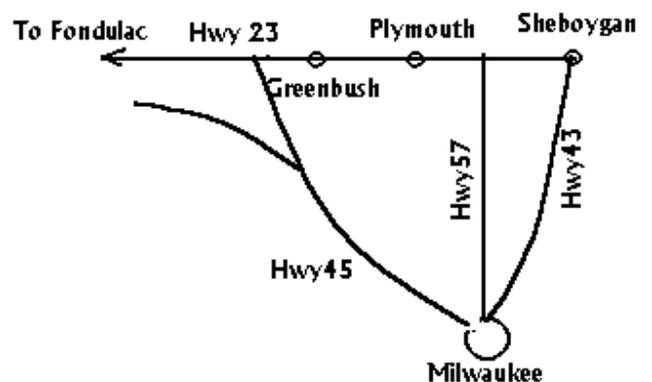
President Scott Jamieson invites any and all members who want to learn observing thru the clubs observatories or scopes. Scott has faithfully demonstrated his desire to rebuild a cadre of interested observers....he's been there at least every first Saturday(and then some).

Open Houses Friday Sept 11, & 25. A good public outreach- All members should pitch in!

MAS Fall Campout, Oct. 16, 17

Speaking of Dan Yanko, Dan announced at the August Board Meeting that the Club has again reserved sites at the Geenbush site of the North Kettle Moraine State Forest (see inset Map). While this is only the September issue, Campouts some times require a little lead time for some individual to plan for.....so start your planning! If last years response is any indication, this should be another fun session of shared observing, and communing with the fall colors and the great outdoors. Some very busy members just came up for one of the evenings (its about an hours drive from Milwaukee). Non-Campers could also consider nearby Motels.

At any rate, the sites are rented by the club, so all you need is the State park sticker. Try to let Dan (453-3382) know as early as possible if you want to participate.



BOARD MEETING Monday, Sept 14th, 7:00PM at Observatory. All Board members should attend.

Summer Board Actions

The **July Board meeting** focused on the expansion of the MAS Observatory upgrade program to include A & B scopes. The following additional expenditures were authorized.

1.) Sky Commander Digital Setting Circle Set- Based on the success of the computerization of the Z-scope, it is apparent that digital setting circles is a real aid in locating objects. Mounting the encoders to A-Scope will require some adapting of the mount but should be relatively straightforward.

Sky Commander with encoders	\$450
Adpting Mount	\$100

2.) ST-6B CCD Camera- This camera was chosen because all of our scopes have relatively long focal lengths and hence, a larger pixel size is a necessity. The B model is the standard now and has improved cooling to 40 Deg. C below ambient with improved temperature control. To be used on the 12 inch scopes until the 25 inch is brought up to date.

ST-6B CCD Camera with image s/w	\$2900
Eventual Image Process S/W	\$300

3.) DX-1 Crawford Focuser for A- Scope- This focuser will support the heavy loads imposed by the camera to be on this scope and will allow precision focusing.

DX-1 Focuser	\$280
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4.) Pentium Class Computer- This computer will run Z-Scope and the CCD camera, when it is ready. The current computer will run but locks up frequently and is very slow for the mapping software we are using. The new computer will be installed in a donated cabinet on the lower floor with the Monitor/keyboard/mouse on a table next to the scope mount.

Computer	\$1000
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5.) 17 inch Monitor- This monitor would display the star charts and imaging software simultaneously and eliminate having to use two computers when imaging.

Monitor	\$590
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6.) Solar filters for A & B Scope	\$200
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Total Authorized expenditure	\$5845
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Welcome New Members

The following new member applicants were approved at the August Board meeting. Welcome aboard!

Herbert Schoknecht	Douglas Whiteside
David Chevalier & Family	Bruce Brunerhoff
Randy Klaybore & Family	John Hock
Jeff Neumann & Family	

Please join us at the next monthly meeting . MAS members, please make these new members feel welcome!

Membership Renewal Time

The month of September is traditional renewal time for membership in the Milwaukee Astronomical Society. Julie Frey, our hard working membership chairperson, has mailed out renewal applications under separate envelope with forms , instructions, etc. in August. Please respond in the time she requests. Late renewals have caused a lot of extra work and phone calls handling discount subscriptions etc. Help us out...Renew early!

MAS Picnic a great Fun Day!

The July 18th Picnic was a combination of good things coming togetherThe weather was great, the food was par excellence.....and the turnout of 40 to 50 picnickers intent on Gemuechlikeit, good food, and games made it one of the better MAS party gatherings. Master Chefs Yanko, Weber , Hoag, Laskowski et al prepared the Brat and Hamburger cuisine with great flourish (and clouds of blue smoke) which was complemented by "Mother Sentry's" potato salad, chips, desserts etc. It was also a great way to compare astronomy notes under daylight conditions with fellow enthusiasts. Between the games and good fellowship, most people stayed the afternoon. A few diehards who tarried even longer, found darkness descending, wheeled out various scopes and Binocs and closed a nice day by viewing the night sky together.

The success of this event was largely due to the hard work of the Yankos and helpers. President Jamieson personally thanked Dan at the August Board Meeting. Way to go ,Dan!

ALCON 98

I am happy to report an absolutely superb convention hosted by The Louisville Astronomical Society and the Evansville Astronomical Society! ALCON '98 was held at French Lick, Indiana from July 22 to July 25.

The resort-style, historical convention site, offered a beautiful setting for amateur astronomers to convene. Featured guests included Dr. F. Story Musgrave, Jack Horkheimer, Dr. J. Richard Gott, Dr. James Kaler, Dr. John F. Kielkopf, Sarah A. Gavit, Warren Stephenson, Dr. Suketu Bhavsar and Dr. Thomas H. Crawford. Topics included: "Einstein's Universe; Escher's Art" (Bhavsar), "Popullution" (Crawford), "The Comet That Killed Cleopatra" (Horkheimer), "Artist's View of the Universe" (Musgrave), "Deep Space 2: Probing the Subsurface of Mars" (Gavit), "Extreme Stars - At The Edge of Creation" (Kaler).

If you are a teacher or amateur interested in public education of astronomy, you may be interested "Project Astro", which was presented at ALCON for the first time. This new program provides materials and training for those who wish to bring astronomy to the classroom.

Astronomy conferences are highly recommended for both new and experienced amateurs. You can meet other amateurs from all over the country, try your observing equipment in typically better conditions, display your astrophotos in contests, collect observing information sheets, and view presentations from both professional and amateur astronomers. There's also plenty to do, even for the non-astronomer, so you can bring your entire family.

Julie Frey, Alcor Rep

Keyholder Reminders

The board reminds key holders to try to be on site during the early evening hours (especially with good weather) with or without member calling. Members should call Keyholder anyway if they want priority on site. On- site keyholder's first priority is to help new members when requested.

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

Sept 11, 25; Oct. 9 Public open houses
Sept. 11,12 Aldebaran Graze Occultation Trip
Oct. 16, 17 MAS Greenbush StarParty/Campout

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

September

6*	Chris Hesseltine	482-4515
13	Vern Hoag	548-9130
20	Tim Hoff	662-2212
27	Scott Jamieson	896-0119

October

3*	Lee Keith	425-2331
10	Dan Koehler	662-2987
17	Jim Kube	453-8858
24	Scott Laskowski	421-3517
31	Rudy Poklar	786-8931

**First Saturday Observatory nite meetings will be held in parallel with standard Observatory operations. 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 Stearle (Greenfield)	543-7479	8"	Dob reflector

Visit our MAS Website:

<http://members.aol.com/masmemb/index.html>

The Milwaukee Astronomical Society

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

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***NEXT MAS MEETING - FRI., SEP.18, @ 8:00PM**

***IMAGES FROM THE NEW CCD CAMERA!**

***EXPANDED RENOVATION PROGRAM**

