

Focal Point



The Newsletter of the Milwaukee Astronomical Society

July-August 2002

Presidents Corner

By Scott Jamieson

Hello everybody! It's been an interesting month on the hill. As most of you know the 25 inch Cassegrain telescope in Z-dome is an F/15 instrument that performs beautifully on the planets and medium to small deep sky objects. However the field of view is only about 12 minutes of arc with a 32 mm eyepiece, and about 2.5 minutes of arc with the ST9 CCD camera. We have planned to attempt to make it possible to alter this scope to be able to switch from the Cassegrain to Prime focus and back easily for imaging, but first we decided to make a new top ring out of wood to see if the image would be good enough to continue the project.

In case you have never looked at this telescope carefully, the designers made a detachable top ring with this in mind but no one has ever built a new ring to try it. The ring was easy enough to make by laminating 3 layers of plywood but the vanes and central focuser mount turned out to be more difficult. With lots of searching scrap boxes at home we found the pieces that "looked like telescope parts" and got it all working. In early May, Gerry Samolyk and I removed the Cassegrain ring and installed the new Prime focus ring, along with 48 pounds of weight to restore the proper balance. Since the main use for this adaptation was to allow us to go after very

faint asteroid occultation's, we attached a very sensitive surveillance TV camera and waited for a good night. (These have been few and far between lately!) When a clear night finally arrived, I was able to see 14th magnitude stars in the field and the globular clusters, such as M15 were absolutely beautiful on the TV screen! With this rig, the focal length is 75 inches at F/3 and the field of view with the TV camera is 8X6 minutes of arc.

With such a fast system, I really had doubts that the field would be good enough to use the whole field of the ST9 camera, but decided to try it after the May club meeting if the weather was good. We had a good meeting and talked a lot about the possibility of moving the club and then many of us adjourned to Z-dome to try the first images with the ST9 at Prime focus. Well, since I'm sure you have already noticed the image of M15 on this page, you know it worked very well indeed! The image is a combination of only 3 twenty second exposures in the Track and Accumulate mode on the camera software. The image on the computer monitor was even better and the expressions of delight and amazement made all the work worthwhile!

We shot several other objects that night but it had been a long day for me so we shut down knowing that it was definitely worth while to perfect the ring and do something to make it

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possible to switch back and forth easily. We are now working on a simple hoist attached to the dome to do most of the work but the need for alignment precision will require guide pins to achieve. Hopefully by the end of summer this conversion will be easy enough to be done as needed

This month we had an opportunity to watch an asteroid occultation with this rig and it worked great! We didn't actually see the 11th magnitude star blink out because the path turned out to be over lake Michigan, but we were able to see the 13.5 magnitude asteroid approach, merge and then separate from the star while sitting back watching the TV monitor. Of course this was all recorded and many people have seen the tape. This may seem to be not as much fun as watching the same event through the scope visually but in this case 10 people could have watched the event easily with out having to stare at a star for 20 minutes. (Harder than it sounds). In any event, if we had seen an eclipse of the star, measurements of timing and duration to very high accuracies would have been easy with the VCR playing the tape back frame-by-frame.

I know that many members do not share my enthusiasm for the higher tech end of amateur astronomy but I encourage all members that are good visual observers to take a crack at imaging. It's easy and can only be described as great fun! I consider it one of my responsibilities to continue to develop the capabilities of the clubs equipment and appreciate those enthusiastic members who continue to help and inspire this effort.

This is a picture of M51 with a total of 60 seconds exposure. Tests will be continuing this month to see how faint we can go with this setup.



MAS Picnic

By Vern Hoag

Don't forget the annual picnic on Saturday July 13th. The picnic will start at 3:00pm. Come on out and enjoy a afternoon of good food, great talk and an evening of observing.

Welcome New Members

We would like to welcome to our club Thisath Kularatna. Please feel to come out to the observatory and don't be afraid to ask questions.

MAS Meetings

The meeting schedule will be as follows. There is no general meeting in July and August. They will begin again on September 20th at the observatory at 7:00pm for the board meeting and 8:00 pm the general meeting will begin.

Board meetings will be on July 17th and August 21st at 7:00pm at the observatory.

Library News

By Scott Laskowski

The 2003 Astronomy calendars by Kalmbach publishing will be available at the MAS picnic and future meetings. The retail price is \$11.99. This calendar includes, monthly astronomical events, historical data and beautiful images of our universe. The discount price is for MAS members is \$6.00. Why not take advantage of this great price break.

Thank you Gary Parson, for the donations of many books and two video tapes, including from Kalmbach publishing:

Galaxies and the Universe

Edited by David Eicher-1992

With recollections from "Deep Sky Magazine" and many beautiful photographs of galaxies and how to find them.

Beginners guide to the sun

By Peter O. Taylor and Nancy L. Hendrickson-1995. Understanding our own star is the beginning. With history and modern scientific techniques we can map the evolution of stars with our own sun as a guide.

Observing for the fun of it.

By Melanie Melton-1996

This book describes the very basics for observing. Naked eye observations of the solar system, moon phases, where the stars are in the night sky. Buy binoculars, then telescope. Your choice will determine your enjoyment in the hobby.

Also donated by Gary Parson is the following book and video's.

Spacefaring: the human dimension.

By Albert A. Harrison-2001

Psychology-how will people act and react to space flight in the future? What are the consequences and results? Are people capable of

setting the high frontier? Explore the problems and consider the answers we all face.

The quest for contact: NASA & SETI institute, ASP

Searches by many organizations checking for extraterrestrial intelligence, radio signals mostly none have been found. They describe it as a bronze needle in a celestial haystack. (VHS 35 minutes.

Voyager: Neptune encounter highlights.

ASP-1989

The tape starts with music, animation and narration describing the ships encounter with Neptune. Then it will show you actual photo's, Time lapsed atmosphere, rings and moons. (VHS 35 minutes. You will be able to see on these tapes some things most people never see on tv. If you have interest in these books or tapes or anything else in our great library please take advantage and check them out.

The Astronomy Camp Experience

By Chris Limbach

For 8 days this past June I was fortunate enough to attend an astronomy camp on Mount Lemmon in Arizona. Organized by the University of Arizona and led by Stuart observatory director Don McCarthy, this camp has been the greatest astronomy experience of my life so far. After I returned from Arizona I knew I had to share the experience with everyone at the Milwaukee Astronomical Society.

As for myself, my name is Chris Limbach and next school year I will be a sophomore at Marquette University High School. I've been a member of MAS for a few years now and can't wait to become more involved. I learned of this astronomy camp while cruising the web early in 2002. The Advanced

Teen Camp (there are also beginner teen, educator, and adult camps) takes 26 teenagers ages 13-18. Although no astronomy background is needed, having some astronomy background helps considerably. Entrance into camp was competitive, so first I had to turn in a form and write an essay about extra solar planets. Luckily I did get accepted, so in the months before camp I conversed with other campers via an Internet forum. The forum allowed us to get to know each other and discuss various research topics.

Then the day finally came, I was off to camp. The campers came from many states as well as Nepal! The purpose of the first day was for everyone to get acquainted and to receive an introduction to what camp was all about. The whole camp was centered around research projects we would conduct, but included many other activities. During the first two nights we were able to get acquainted with the telescopes and write up our research projects. These project outlines would later be submitted to the telescope allocation committee (counselors), which would determine how much telescope time a project got. During the first two nights we also had hands-on access to the 12", 40", 60" and 61" telescopes, as well as an ST7, ST9, photometer, and 2k x 2k infrared CCD on the 61"!

During the afternoons we listened to presentations that were given by the counselors. These ranged in topics from planetary geology to electromagnetic radiation to cosmology. Much of the material was fairly basic, but was meant to educate those campers with little to no background. The counselors gave exquisite presentations mainly because they were all either studying astronomy related topics in college or already had an astronomy-related degree. One counselor even was in the process of collecting data for her doctorate thesis on lenticular (S0 type) galaxies, and needed some of the campers to collect data for her!

The middle few nights were spent gathering and analyzing data that we gathered for our projects. Every group also participated in a Mars Sample Return debate wherein we debated the pros and cons of various aspects of a future sample return mission. On the third last day we took a trip to nearby Kitt Peak where we viewed the 4-meter Mayall telescope and bought souvenirs. On the last night of camp we finally gave our research presentations. Topics ranged from the spectroscopy of the black hole accretion disk of SS433 to the resolving of Charon from Pluto to the age of the Lagoon nebula. I personally worked on the Pluto/Charon project, a nebulae age determination project, and a gamma ray burst project. All of my projects were successful except the gamma ray burst project. This was mainly due to the fact that a gamma ray burst didn't occur during camp.

But besides the research projects the camp also meant so much more. It gave me lifelong memories, friends, a tolerance for sleep deprivation, and a unique love for science and astronomy that can only be achieved through hands-on participation. Beyond the liquid nitrogen ice cream, Star Wars/adaptive optics skit, and karaoke at the 40" dome, there was a unique sharing of everyone's passion for astronomy. It's only once in a blue moon that you see teenagers battling it out for time on a 12" LX200.

Letter from the Editor

By Gary Parson

I would personally like to thank Chris Limbach for the great article seen above. The letter was well written and his experience will be of great interest to us all. Thanks again Chris and nice Job.

Keyholder list:**June**

29..... Scott Laskowski.....414-421-3517

July

6.....Terry Ross..... 262-784-2093
 13.....Gerry Samolyk..... 414-529-9051
 20..... Tom Schmidtkunz.....414-352-1674
 27..... Neil Simmons..... 262-889-2039

August

3..... Chris Weber..... 262-789-7128
 10..... Dan Yanko..... 414-453-3382
 17..... Wanda Berner.....414-691-2360
 24..... Paul Borchardt..... 262-781-0169
 31..... Tim Burrus.....262-783-6572

September

7.....Brian Ganiere.....414-961-8745
 14..... Carlos Garces.....262-786-2623
 21..... Brian Garness262-538-3888
 28..... Chris Hesseltine..... 414-482-4515

October

5.....Vern Hoag.....62-548-9130
 12.....Tim Hoff.....262-662-2212
 19..... Scott Jamieson.....262-896-0119
 26..... Lee Kieth.....414-425-2331

November

2..... Dan Koehler.....262-662-2987
 09..... Scott Laskowski.....414-421-3517
 16..... Terry Ross.....262-784-2093
 23..... Gerry Samolyk.....414-529-9051
 30..... Tom Schmidtkunz.....414-352-1674

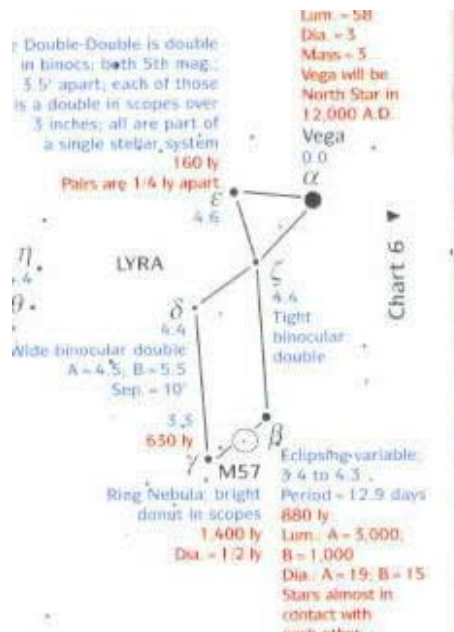
December

7.....Neil Simmons.....262-889-2039
 14.....Chris Weber.....262-789-7128
 21.....Dan Yanko.....414-453-3382

How to find it!

By Gary Parson

This issue of how to find it will deal with one of my favorite targets M57 in the constellation **Lyra**. The ring nebula is a giant smoke ring of glowing gas and is one of the best planetary nebulae in space. The ring is made up of gas that was puffed out by its central star some 6000 years ago. The constellation Lyra lies between Hercules to its west and Cygnus to its east. Look for the brightest star in that area it will be the star **Vega**. From the star Vega you will see a rectangular shaped box go to its southern end. Look between the two stars and you will find M57. See star chart below.



Star chart borrowed from Nightwatch by Terrance Dickinson a highly recommended book for all beginners and even the advanced observer.

6 MAS Officers/ Staff

President Scott Jamieson 262-896-0119
Vice President Vern Hoag 414-425-2331
Treasurer Dan Yanko 414-453-3382
Secretary Henry Gerner 414-362-4441
Observatory Director
 Gerry Samolyk 414-529-9051
Assistant Observatory Director
 Paul Borchardt 262-781-0169
Focal Point Gary Parson, Editor 262-895-3015

Future MAS. Events

July 13th MAS Picnic starts at 3:00pm

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 Chairman, Carlos Garces, 16430 Melody Drive, New Berlin, WI. 53151. Phone: **262-786-2623**.
 Email : cgarces@wi.rr.com

Focal Point Publishing Guidelines

Focal Point Newsletter is published bi-monthly (Sep Nov Jan Mar May and 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 Mail, or diskette in a text or Word compatible format, if possible. Submit FP inputs to:

MAS Focal Point c/o Gary Parson
 7521 E Wind Lake Rd
 Wind Lake, WI 53185-1513 – Email glpar1951@prodigy.com.

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 17 Wanda Berner 414-691-2360
 24 Paul Borchardt 262-781-0169
 31 Tim Burrus 262-783-6572

MAS Open House's

August 9.....Perseid Meteor showers

September 6...The Milky Way

September 27...Planets around other stars????????????

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

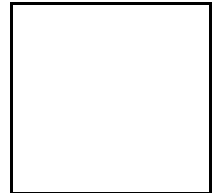
MAS Observatory	262-542-9071
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MAS Web Page: www.milwaukeeastro.org

The Milwaukee Astronomical Society

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

CHANGE SERVICE REQUESTED



**The Next general meeting will be held on September 20th at 8:00pm at the observatory!!*

