



Endangered Species

From the President

At January's general membership meeting we had a very interesting program. Richard Burnham, formerly of Astronomy magazine (but who did NOT write the classic book, "Burnham's Celestial Handbook") came at short notice to share his expertise on "Celestial Maps from Parchment to Pixels". (I love that clever title!)

From his talk you would have learned that star maps of the past were not anything like that of today. Back then, star maps had the figures of the constellations on them. While many of them were overly ornate and beautiful, they served the purpose of identifying the stars in the constellation. Today, stars have unique names like "Vega" or "Alpha Lyrae" but back then they would say "The star in the eastern arm of the lyre". All stars had a descriptive name referring to its position in the mythical figure. (But you already knew that, didn't you?) This was just one of the many things Robert Burnham showed the membership during his program.

Highly interesting and educational programs have been a hallmark of your Society for many years thanks to the efforts of the several Program Chairpersons we have had. Astronomers from Madison, Chicago and Yerkes Observatory in Williams Bay, WI have graced our hallowed halls telling us of their recent discoveries or just to share an favorite astronomical topic.

These programs are one of the major reasons many people have joined our Society and come to the membership meetings. Well, these programs are an endangered species! Our last Program Chair, Tom Renner, who served the Society in many capacities for many years, resigned early last year and we desperately need a replacement. As one of my final acts for the Society I want to reach out to one of you reading this and ask that you seriously consider becoming more involved in your Society by volunteering for this task.

Being a Program Chairperson is a challenging position, make no bones about it. It requires that you cultivate a series of relationships with many different astronomical organizations and be willing to contact them to find speakers. But you can also be creative and branch out on a tangent. I remember one of the most memorable programs was not from an astronomer at all, but a professor of ancient

Greek literature who talked about the mythology of the constellations. Many members stayed after the meeting to talk with her more!

I know that one of you out there has been thinking of getting more involved in your Society and would love doing this. Well, don't wait any longer! We are in real danger of not having programs at future membership meetings! If that happens, we would be forced to talk with....each other.....!?!?!?

-Lee Keith, President

**Next MAS meeting, Friday
February 20, 1998 @ 8:00PM
Room 133, Physics Bldg
UWM Kenwood Campus
(Corner Of E. Kenwood &
N. Cramer St.)**

February MAS Events

Feb. 20 monthly meeting will be held per the adjacent inset box. Again a speaker is planned but our hardworking president has been doing double duty (see column 1, this page) and speaker info was not available at the time of going to print. The MAS board meeting will precede the general meeting at 7:00PM. See map below for meeting site location.

Eds Note: The adjacent Olson Planetarium will be have a 7:00 PM show on the 20th . Starting on Jan23 and continuing on,, the subject will be South for the Winter. Sounds good to me!

First Wednesday meeting, is on February 4th, 7:30 PM at the MAS observatory, hosted by Observatory Director, Gerry Samolyk, weather permitting. This is an open forum meeting addressing various astronomy subjects. All welcome.

Board Doings

The following items of significance were discussed at the January board meeting.

* Gerry Samolyk reported that Z scope renovation and digitizing, is in abeyance until Spring. It is awkward to the hardware and software debugging effort, in the unheated facility.

*The Annual MAS Banquet ,tentatively scheduled for March, has been deferred indefinitely.

* Meeting at UWM is now planned for Jan., Feb., and Mar. of 1998 with return of MAS meeting to the Observatory site in April

*Lee Keith has a total of 8 open houses in mind ...4 in the Spring and 4 in the fall. Dates are tentative and will be published after Board approval. Similarly, Spring and/or Fall campout dates are open awaiting commitment of campout leaders.

*Reminder that the election of President, Vice President, Secretary, & Treasurer as well as 4 board members will be held at the May Meeting. Lee Keith, current President, has already announced he will not run for re-election.

Library News.

Listed below is the latest edition to the MAS video collection. The signout procedure for the VHS video tapes and the **Sky Globe** SAO Star Dataset & star atlas (5 copies of two 1.44mb PC diskettes each are available) is to write the date ,your name, and phone number on the appropriate orange(video) or yellow (computer diskettes) 3" x 5"sign-out cards located in the blue box next to the video tape container. Books can be borrowed from the library (now located in the Z-Building) by writing the date, book title, your name, and phone number on the paper tablet hanging from the main bookcase. Reminder to the recalcitrant; materials should be returned to the MAS library within two to three months. If there is a problem, contact the librarian.

Asteroids: Deadly Impact, The National Geographic Society- 1997. VHS video tape, 58 minutes. Eugene Shoemaker was a rebel in the scientific community. After studying Earth craters, commonly believed to be volcanic in origin, Shoemaker surmised an extra-terrestrial origin by asteroid impact, similar to impact craters found on the Moon. The secret , held only by his wife Carolyn, was that becoming a Geologist was his ticket to the Moon to test and prove his theories first hand as an Astronaut. Health problems developed that kept him from this dream. But, by finding minerals created by the energy of impact, not volcanism, in the circular craters of the Earth, and then the Moon, vindicated Shoemaker's theory.

Eugene & Carolyn Shoemaker and David Levy discovered the first comet to ever impact a major body of the solar system, Jupiter: Comet Shoemaker- Levy in July of 1994.. This event brought home the possibility of an earth impact to the public. In the quake of reality, Congress has allocated money for the study of pr4evention of comet and asteroid impacts of the Earth.

Tragically, Gene Shoemaker died in an auto accident in Australia last July; Carolyn survived.They were exploring impact craters.- *Scott Laskowski, MAS librarian,421-3517*

GOT THE OLD MAGAZINE BLUES?

Donate those old unneeded back issues of Astronomy or Sky & Telescope magazines to the MAS to give out at Open Houses. They will be put to good use inspiring the next generation of astronomers. Just leave them at the Observatory with a note that they are to be given away

Asteroid Occultation Practice Software is freeware for DOS

The MAS does a lot of observations of what are called occultations where a planet or asteroid passes in front of a star, partially or completely occulting it, or making it disappear. Our most popular activity is a "grazing lunar occultation" where the Moon's limb, or edge, skims in front of a star, causing it to blink as it passes behind lunar mountains and valleys. It is one of the most exciting experiences to actually be aware of the Moon's rapid movement through the sky.

The AOPS software allows observers to get a feel for what it is like to see a star disappear, or at least dim down, when an asteroid passes in front of a star for a short time. These "minor planet occultations" are very valuable to planetary astronomers in pinning down the position of these little pieces of the early Solar System.

It consists of a simulated view through an eyepiece of a star field. A star at the center is about to be occulted by an unseen asteroid. After a random short period of time, the star will dim by about 2 magnitudes (to about 20% of its original brightness) for a short time then brighten again. Pressing a key as soon as you seen the dimming or brightening causes AOPS to compute your reaction time. Measuring your reaction time and making it consistent is one of the best ways to increase the accuracy of observations like these.

This excersize will help not only for minor planet occultations, but for standard and grazing lunar occultations which the MAS does throughout the year.

This software is available under the file name aops.zip.

MAS Computer Group Rating: * * * (out of 5)

Call Lee Keith at 425-2331 for more information.

Miscellany

* On page 3 of this issue is featured Scott Jameison's new 15" scope. Back in the September 97 issue of FP, Scott's novel observatory dome was featured as well. However, I'm sure there are other members who have crafted astronomy equipment worth sharing with the rest of the membership. If you think you do, please contact me and lets give it a whirl. I'm willing to do the "brain pickin", write-up, photos etc.

* Over the past issues (since Fall) it's obvious that the MAS library is constantly adding quality material for member use. Wouldn't these blustery, cold, and gray winter days be a great time to curl up with a good Astronomy book and do a little catch-up on studies? The sad fact is snow accumulation and lower observatory winter activity also can make the library less accessable. If you want to do some "cold " browsing in the library, let the librarian ,or keyholder (including myself) know to arrange for an access time, weather permitting. -*Editor*

Scope Builders Corner

Once again, we feature inveterate scope designer Scott Jameison, and his new telescope with a 15", F4.5 mirror integrated into a novel equatorial mounted Newtonian scope.

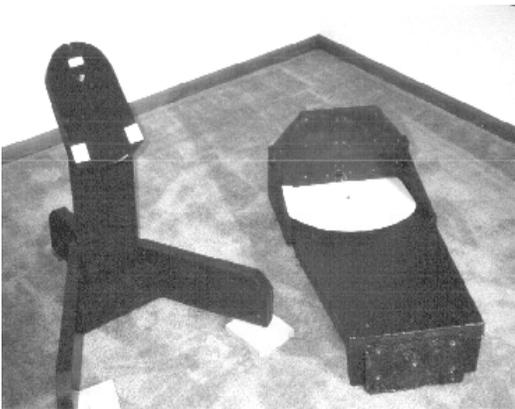
The assembled scope is shown in the central photo below. It has a classic simplicity that belies the engineering that has gone into the design.

The scope design was centered on a 15", F4.5 primary mirror, that was fabricated for Scott by Nova Optical Systems in Cornish, Utah. The upper and lower tube assemblies as well as the pedestal assembly containing the RA/declination axes are all fabricated from "apple" plywood, a premiere laminated wood with excellent stability and weathering characteristics.

In detail, the upper tube section, containing the focuser, secondary mirror/spider is made of two stacked, concentric applewood (1/2" thick) rings with spacer structure between the rings sufficient to provide rigid tube for anchoring the secondary spider, and platform the focuser. This open upper tube is internally lined with a flexible, matte black, plastic sheet for light baffling.

The lower tube section is a box structure containing the mirror. The box appears to have a 45 deg slice thru it. In

Continued next column



Polar Axis ,RA (left) pads and laminate surface (right). Note 3 teflon pads and mating white laminate surface on Dec/counter-weight assembly (right).

Teflon pad portion of the declination axis. Note the wide spacing of the four pads. Central bolt hole uses a brass bushing around the axis bolt to minimize side play. Note the laminate part of bearing on mirror box (see center photo).

The Jameison 15" F4.5 Telescope. An elegant design, yet simple to assemble.

Scope Corner contn'd

truth, it is a triangular box (with an oval face to maximize strength). The mirror assembly is easily removeable from the bottom of this box via 3 spring loaded bolts (see photo on lower right).

Lastly, the two tube sections are held in rigid align by 8 aluminum struts (actually removeable as 4 triangular sections).

Perhaps the most novel part of the design is that Scott has adapted the teflon pad /laminate surface from the Dobsonian bearing scheme to the Equatorial. If the RA & DEC axes of this design used conventional bearings, the cantilevering of the tube might make it more unstable than a "fork mount" design. However, by using widespread teflon pads on a large laminate bearing surface for each axis, these widespread "torque couples" tend to negate any mechanical instabilities.

Scott was even very judicious on teflon pad placement to equalize the load distribution. See the photos at lower left. Note that when the scope is assembled, the bolts thru both axes are sleeved with a bushing to minimize sideplay.

Lastly, the pedestal holding the RA pads is triangular in cross section with three legs. The section containing the RA laminate and Dec pads extends out, as a cantilever arm, away from the scope tube to hold balance counterweights, part of which is a battery used for the clock drive (see lower left photo). All of these assemblies are made of apple plywood (1 1/2" thick) and the entire scope is painted a deep blue

The tube assembly weighs 82 lbs and the entire scope weighs 150 lbs. Scott primarily intends to use this scope in his back yard observatory, but it readily knocks down to luggable sections for occasional offsite use.

Scott is still in process of incorporating a linear threaded shaft/ traveling nut clock drive that will give him an hour of tracking time.

Scott was nice enough to share a brief "first light" on his new Scope with Vern Hoag & myself. The scope could be easily & smoothly positioned to any part of the sky with a gentle push. The view of the Orion Nebula can be simply described as a rock steady spectacular! -Editor

Mirror Cell assembly. Mirror sits on a 9 pt floating cell & kept in place by the 4 twin pads abutting the mirror edge.

MAS Officers/ Staff

President	Lee Keith	425-2331
Vice President	Scott Jamieson	896-0119
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

Editor	Rudy Poklar	786-8931
	Email: rudyp70855@aol.com	
	rudypokr@execpc.com	

Ed's note: I'm transitioning to ExecPC and will eventually chop AOL.

Distribution Margaret Warner

Future MAS Events

February 20 Monthly meeting at UWM
March 20 Monthly meeting at UWM
April 18 Monthly meeting at MAS Observatory
May 16 Election of Officers , Meet at MAS Observatory
Spring, Summer, Fall- Schedule of Star Parties and club outings to be announced..8 Star Parties tentatively planned

Saturday Keyholders

February

7	Jim Kube	453-8858
14	Scott Laskowski	421-3517
21	Scott Jameison	896-0119
28	Terry Ross	784-2083

March

7	Gerry Samolyk	529-9051
14	Tom Schmidtkunz	352-1674
21	Ken Waraczynski	321-0918
28	Dan Yanko	453-3382

April

4	Wanda Burner	646-8229
11	Paul Borchardt	781-0169
18	Greg Cieslak	529-0548
25	Brian Ganiere	961-8745

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

MAS Observatory 542-9071

Ed's note: To verify First Wednesday Meeting (in inclement weather), call observatory after 7:00PM on first Wednesday date .If you get a recorded message, no one is present, and probably no meeting.

The Milwaukee Astronomical Society

11040 W. Meinecke Ave. #4
Wauwatosa, WI.53226-1247

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