

FOCAL POINT



Newsletter for the

Milwaukee Astronomical Society

March 1990

From The Editor

Let us take this opportunity to inform and encourage our membership to participate in the Spring Field Trip. Under the capable direction of MAS Program Director Tom Renner, our Society has made arrangements to visit two unique astronomical facilities - the historic Yerkes Observatory which houses the famous 40" refractor; and the University of Wisconsin-Whitewater campus where the Physics department recently started using an ultra modern telescope.

Since we anticipate an enthusiastic response to this exciting itinerary we're suggesting you respond early. Due to limited space, the trip will be limited to 94 members. Note: This event falls on the weekend of the Greenbush Spring Campout.

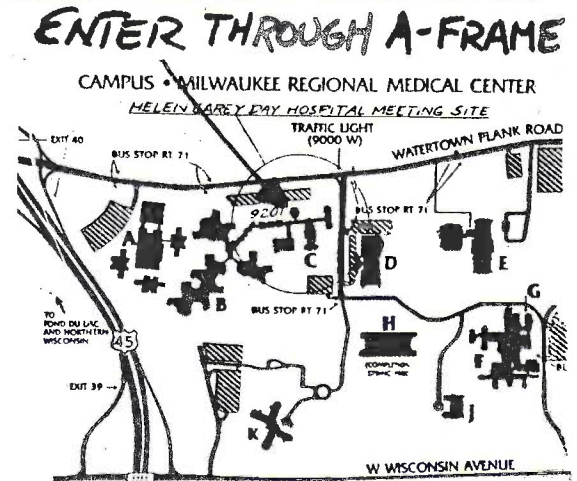
-Matthew McNeeley

March Program-Meeting

Our speaker for the March 16 meeting will be Mr. Richard Dreiser of Yerkes Observatory in Williams Bay, Wisconsin. Mr Dreiser will describe the interesting history of Yerkes Observatory and some of the colorful and famous people associated with the observatory since its construction over 90 years ago. He will also describe some of the continuing work at Yerkes and at other research facilities done by the University of Chicago which owns and operates this famous observatory. This program will be an excellent warm-up for our Spring Field Trip to Yerkes Observatory in April.

All members and guests (that's how we grow) are invited to attend. Time is 8:00pm at the Helen Carey Day Hospital Building, 9201 W. Watertown Plank Rd. For security reasons, the door is open 7:30 - 8:15 only

-Tom Renner



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Calendar of Events

March 12, Monday	7:30 pm Board Meeting Brian Ganieri's House
March 16, Friday	8:00 pm Program-Meeting
March 23, Friday	Deadline for <u>Focal Point</u>
March 26, Monday	New Moon
April 4, Wednesday	First Wednesday Meeting 7:30 at the Observatory
March 12, Monday ^{April 9}	7:30 pm Board Meeting at the Observatory

Saturday Nights—Member night at Observatory—Call key holder

Library News

At the January meeting, member Barb Swiontek donated a number of books. Assistant Librarian June Regis reviewed the following:

The Nemesis Affair; A Story of the Death of Dinosaurs and the Way of Science, by David M. Raup. Norton, 1986.

The Author is a paleontologist and Professor of Geophysical Sciences at the University of Chicago. He suggests our sun has a small companion star named Nemesis or the "Death Star" and that this star has indirectly caused the periodic extinctions on our Earth. Much of the book describes how scientists developed this theory and how the evidence to support it was found. This very readable and enjoyable book is for the general public.

The Discovery of Neptune, by Morton Grosser. Harvard Univer. Press 1962.

The author, a science historian, covers the 1846 discovery of Neptune. A brief introductory chapter includes a historical survey of planetary astronomy and continues on to describe the discovery of Uranus. Next brief biographies characterize the astronomers who had a hand in locating the 8th planet. Anyone who enjoys the history of astronomy and how discoveries are made will appreciate this work.

Frozen Star; Of Pulsars, Black Holes and the Fate of Stars, by George Greenstein. Freundlich Books, 1983.

G. Greenstein is a Professor of Astronomy at Amherst College and has published numerous technical articles on astrophysics. Written in the first person, this book begins with an imaginary trip to a neutron star. It covers the discovery of radio bursts in 1967 and subsequent year-long discussion before a "pulsar" or rotating neutron star was named. Part 2 begins with a frightening description of our Sun becoming a black hole. Part 3 describes the Chanrasekhar limit and the probable fate of our Sun. This book will be best understood by readers with a background in astronomy and an enjoyment of analogies.

We'll review the other books next month. Some time before that we hope to place them in the NEW BOOKS box at the observatory. Thanks, Barb, for your generosity.

Another recent purchase is Observing the Constellations by John Sanford. Here's an observing guide you can grow with. The introduction hits essential details a briefly as possible so a beginner can use the book. It also alludes to possibilities of further development, a theme which is carried throughout.

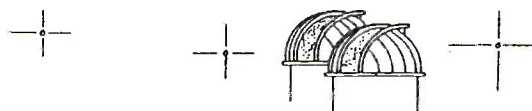
Each constellation is covered in 2 or 4 pages which include a Tirion star map, a mythology-in-a-box and a unique feature of the book - a photograph of the constellation as it might be seen by the naked eye. There is a discussion of the grouping as whole and a table of telescopic objects with coordinates. If Sanford's descriptions of multiple stars, nebulae, etc. don't give you aperture fever, I don't know what will. Colorful 'gallery' photos & historical asides enhance each section.

Dan Koehler has donated Kodak Tech Bits No. 2, 1989 for our vertical file. It features UV photography and contains Part VI of the Photographic Sensitivity series: Exposure Determination.

If the terms 'Scooter' and 'Cantaloupe Terrain' quicken your pulse, you'll be interested to know that our slide collection now includes 20 images from the Voyager at Neptune adventure. There is also a sheet of descriptive notes in the script folder.

- Sally Waraczynski

From the Past...



DOUBLE DOME

— 20 Years Ago

SUN PILLAR PICTURES WANTED:

Professor Robert Greenier of the UWM Physics Dept., who earned gratitude with his entertaining and informative talk on sky phenomena in February would like a favor in return. He's looking for sun pillar pictures. A sun pillar is a bright vertical column of light extending from the Sun just as it is disappearing beneath the horizon. Please send them to him at... (address deleted since this is a 20 year old request!)

— 10 Years Ago

NCRAL CONVENTION


The 1980 North Central Astronomical League Convention, hosted by the Sheboygan Astronomical Society, will take place Sat., May 10 at the Sheboygan Center of UW. The April Double-Dome should have complete details. In the meantime, start your papers and plan to attend.

For Sale

12 1/2" f/5 mirror, Celestron C-8 with accessories. Make an offer. If interested or for more info, call John Asztalos at 774-5418.

Televue 32mm Plossl, for \$70.00. Call Matthew McNeely at 354-5347.

10" f/5.6 equatorial with heavy duty mount and drive. Coulter mirror, 50mm finder and Telrad. Call Nolan Zadra for details. 962-3021 eves.

★

**Ask
 The
 Astronomer**



"Solar eclipses are one of the most wonderful sights to behold. Is the Earth the only place in the Solar System where they can occur?"

-In the Dark, Milwaukee

Dear In the Dark,

Solar eclipses occur when the Moon covers the Sun's disk allowing the wispy, almost ghostly outer atmospheric corona of the Sun become visible. The Moon must be large enough to cover the Sun and this is not always possible due to the varying distance of the Moon from the Earth. The Moon & Sun must be properly aligned, which happens only when the Moon's orbit crosses the Sun's path in the sky - about every 6 months.

Using trigonometry & a calculator, you can easily find the size of the Sun and a satellite from any planet. If the satellite is at least as large as the size of the Sun as seen from that planet, an eclipse can occur when & if they line up in the sky.

From my calculations I have found that from Jupiter, the moon Callisto would give the best eclipse. From Saturn, the satellite Janus would come closest to covering the Sun. On Uranus, even the tiny moons discovered by Voyager would easily cover the small sun, while on Neptune, Neried at its closest could also yield an eclipse. Pluto's moon Charon would overwhelm the dwarfed Sun which would be so small that you would need a telescope to see the disk at all! As a matter of fact, Charon has the largest apparent size of any satellite in the Solar System - a whopping 7 times larger than our Moon looks in our sky! And you'd have to wait 125 years between eclipses.

If nothing else, this should make you appreciate our lovely Moon all the more. It may be our only one, but it's just the right size at just the right distance. And what an orbit! It almost makes up for the %\$#@#%\$% brightness of it!

April Grazes

Next month we plan to observe three grazing occultations of stars by the Moon, weather permitting. The cable/recorder equipment will be used for each expedition so all you need to bring is a telescope. There are eight 10" portascopes as well as a few smaller scopes at the Observatory that are available.

Our first event is on Saturday, March 31 at 10:13 CST. The location will be on Sunnyslope Rd southeast of the Observatory. The 8.0 mag star will graze the Moon's limb 13 degrees off the northern cusp. The Moon will be 35% sunlit. Observers should be on the site by 9:30 to receive a station assignment. Because of the convenient time and location we should get a lot of observers for this one.

Two weeks later a 5.4 mag star will graze the 77% sunlit Moon. The time of this event is 1:46 am Sunday, April 15. The location has not been finalized but we will probably set up in northern Racine county.

Our final graze will be on Monday night April 30 at 12:30 am. An 8.0 mag star, cusp angle 11 degrees will graze the 43% sunlit Moon. Location is in southern Sheboygan county.

- Gerry Samolyk

Observing Clubs

Got a case of spring or cabin fever? Join an Observing Club, just for the fun of it! It's a great way to spend your evenings!

MAS offers for your Deep Sky observing pleasure, the Messier Club Observers Handbook or the Burnham Club (double stars) Observer's Handbook. Send in an 8.5" x 11" SASE with \$1 postage to Lee Keith, MAS Observing Club Coord., 1239BE. Randolph Ct., Milwaukee, WI 53212. After observing & recording the objects you'll receive a certificate from the Astronomical League.

The handbooks contain a wealth of information on observing techniques, hints and detailed maps for locating the more elusive objects. Best of all, they're FREE!

Saturday Nite Keyholders

March 10	Tom Schmidtkunz 784-0253
March 17	Peter Smitka 785-0926
March 24	Virgil Tangney 327-7976
March 31	James Toeller 352-7144
April 7	Richard Wiesen 781-4786
April 14	John Asztalos 774-5418
April 21	Greg Cieslak 744-5703

Good Omens

This past Ground Hog Day weekend was indeed sunny and bright for members of the Wiesen and Kube families as each celebrated new arrivals. On February 2, John and Sally Wiesen celebrated the birth of their first child, Ann Caroline. The promise of the season was continued two days later as James and Dorothy Kube rejoiced with the arrival of their first grandchild, Steven Kenneth Bauer.

Congratulations to the parents and grandparents of both families. May the promise of sunny days and clear nights ahead be realized.

The 1990 NCRAL Convention

The 1990 NCRAL CONVENTION will be held on Saturday, April 28, 1990 at the YaHara Conference Center, 5908 River Road in Waunakee, WI (just north of Madison). This year's event is sponsored by the Madison Astronomical Society. If you have questions or need registration materials, please call Dan Koehler, NCRAL Chairman at (414) 662-2987. Also, a reminder that the nomination process for the Regional Award is currently underway. NCRAL Vice Chairperson Marion Bachtell is accepting nominations at: 1901 South 10th Street, Burlington, IA 52601 (for more info you could call Dan Koehler or Marion, (319) 753-1442, evenings). Since there are many deserving individuals in MAS, let's nominate one, or several, for this most prestigious award.

Girl Scouts see 'Awesome' Star Show

My son Mark and I would like to thank MAS member Carol Stachowicz and the Girl Scouts of Waukesha Chinook Center for inviting us this winter season for two evenings (Feb. 9 and Mar. 2) under the stars. We used the Apollo scope and my Dobsonian clone to highlight the wonders of the winter sky.

Observing such seasonal favorites such as the Pleiades, Orion Nebula, Jupiter, our Moon and a real favorite "The Christmas Tree" (NGC 2264), the cold night air was often pierced with the sounds of wonder: "Marvelous... , Awesome... , and Wow!" The young astronomers, their parents and leaders generated such a level of energy that the crisp and cold evening was warmed by their enthusiasm. Their heartfelt thanks made our visit feel complete. We thank them for inviting us. Each visit helped us better appreciate their commitment to the study of the night sky and the appreciation of its beauty. Keep up the good work!

- Matthew McNeely

Building Materials Needed

The board has authorized the construction of a new garage at the observatory. The permit process is now underway. So far, a donation of concrete has been provided by a customer of member Tom Berner. If we can get additional material we could keep the cost of this project and other needed observatory maintenance, down. The labor, as always, will be provided by our members.

If you can donate (or talk someone into donating) lumber, siding, roofing or any other materials, contact me or Paul Borchardt (781-0169). Remember that any donation is tax deductible.

- Gerry Samolyk

Comet Austin Coming!

Date	Time, CST	Altitude	Azimuth	RA	DEC	Sun AU	Earth AU
3-21	18h 25m	12.6 deg	258 deg	1h 38m	Od 22m	.64279	1.39981
3-22	18h 27m	12.7 deg	260 deg	1h 40m	1d 30m	.62233	1.38517
3-23	18h 28m	12.8 deg	261 deg	1h 41m	2d 38m	.60196	1.37025
3-24	18h 29m	12.9 deg	263 deg	1h 42m	3d 49m	.58173	1.35504
3-25	18h 30m	13.1 deg	265 deg	1h 43m	5d 06m	.56167	1.33952
3-26	18h 31m	13.1deg	266 deg	1h 44m	6d 14m	.54184	1.32365

- Richard Wiesen



MAS INFORMATION

MAS OFFICERS

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354-5347

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961-8752

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662-2987

Obs. Director Gerry Samolyk
475-9418

Assist. Obs. Director John Asztalos
774-5418

Librarian Mrs. Sally Waraczynski
321-0918

Assist. Librarian Mrs. June Regis
962-0896

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476-6986

MAS Observatory

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New Berlin, WI
542-9071

SPRING FIELD TRIP

Plan now to attend the MAS spring field trip to historic YERKES OBSERVATORY and the observatory of the University of Wisconsin-Whitewater on April 21, 1990!

The Yerkes Observatory, located in the Village of Williams Bay, Wisconsin, was constructed in 1895. The observatory building itself is a work of art worthy of the trip. But of course the great 40" refractor, still the largest of its kind in the world, will be the center of interest. Also open for our tour will be the observatory's 41" and 24" reflectors. The observatory abounds in history, and our tour will offer the opportunity to browse its extensive library and other historic memorabilia.

The second stop in the day's tour will be the U.W. Whitewater observatory. This observatory houses a new 16" reflector equipped with a CCD camera, computerized control and other state-of-the-art electronics.

The contrast visible in nearly 100 years of progress in astronomical observatory instrumentation should be nothing less than astounding!

Tour busses will board at the PARK AND RIDE LOT located on WATERTOWN PLANK ROAD at HIGHWAY 45. This lot is located just a few blocks west of our monthly meeting site near the Medical Complex in Wauwatosa. The busses will depart PROMPTLY at NOON! To keep tour size down, The busses will split up--one will go directly to Yerkes, the other will go to Whitewater. Following the tour at each observatory, each bus will travel to the opposite site, then return to Wauwatosa independently. There will be no opportunity to change busses, so board the bus with whom you wish to spend the afternoon! Busses will return to Wauwatosa at around 6:00 P.M. No meal will be provided. You may carry any food or beverage you wish on the bus, and can leave them on the bus during either tour.

The tour will be limited to two busses seating a total of 94 M.A.S. members and their families. Seating will be reserved on a first-come, first-served basis, so send in the attached reservation form early.

MAIL IN FORM: YERKES FIELD TRIP APRIL 21, 1990

NAME: _____

NUMBER ATTENDING: _____ X \$8.00 per person

AMOUNT ENCLOSED: \$ _____ (Make checks payable to the Milwaukee Astronomical Society)

Mail form and checks to:

Tom Renner
4512 Deerpark Dr.
Dousman, Wis.
53118