FOCAL POINT

Newsletter for the *Milwaukee Astronomical Society* September 1990

From The Editor

Once again MAS opens its fall season with a stellar line up of events for your enjoyment and edification. Specific details and dates are highlighted in this and future Focal Point editions. We invite all to take advantage of these varied activities with your presence and participation.

Tom Gill and I look forward to serving you and seeing you at the events throughout the year.

And don't hesitate to share *your* thoughts and insights about some special aspect of observing, the Milwaukee Astronomical Society or astronomy in general. We'd love to hear from you.

– Matthew McNeeley

Inside!

September Program Meeting

Our first program for the 1990-91 season will appropriately center around the Society's well equipped observatory. Paul Borchardt, Assistant Observatory Director and I will highlight the various observatory telescopes with slides and demonstrations and will explain their particular features and uses. We will also describe most of the high quality accessories available for use with the telescopes, such as a filar micrometer (for measuring stellar positions), a photoelectric photometer (for measuring stellar brightness), and a plate holder camera (for high quality astronomical photographs).

If some of this equipment is unfamiliar to you, come to the meeting at the Observatory to learn more about them. This is an excellent opportunity to learn more about one of the outstanding amateur astronomical observatories in the country – our own! See you AT THE OBSERVATORY on Friday September 28. (Note change to FOURTH FRIDAY of September)

– Tom Renner

Calender of Events

September 14-16 ..... ASTROFEST 1990

September 23, Sunday ..... Fall begins at 1:55 CDT

September 28, Friday ..... **8:00 pm Program-Meeting**
At the Observatory

October 3, Wednesday ..... First Wednesday Meeting
7:30 at the Observatory

October 4, Thursday ..... Full Hunter's Moon

October 8, Monday ..... MAS Board Meeting
7:30 at the Observatory

October 19, Friday ..... Annual Dinner Banquet
Old Town Ethnic Restaurant

Saturday Nights—Member night at Observatory—Call key holder

Library News

by Sally Waraczynski

You might recall that our March speaker, Richard Dreiser, offered the Society a book from the Yerkes Observatory collection entitled Revised MK Spectral Atlas for Stars Earlier Than the Sun by W. W. Morgan, et al. We have since acquired the portfolio of plate reproductions and handbook. Obviously, this is a professional level study of historical significance. It and other books in the card catalog with call numbers headed by HIST are in the HISTorical collection currently kept at my home and available by request.

MAS Master Meteor Miner, Rob Reisener, has donated Meteorites: Their Record of Early Solar System History by John Wasson. Coupled with astrophysical knowledge, petrochemical analysis attempts to trace meteoritic minerals as far back as the collapsing interstellar cloud.

We are also grateful to Rob for his gift of six Indochinite tektites from his extensive collection. They are on display in the lecture room.

Available at the September meeting: Library resources listed by subject, title and author. Data entry and printing of this very handy guide courtesy of Tom Renner.

Review: Photonics, 35th edition.
What's this weird technical language that your kids are coming home from school with, such as, "The nematic phase in a mixture of ordinary and polarized light through the focal point of a lens causes the calcite Nicol prism to eliminate the remainder of the ordinary light." What's that again?!

Now's your chance to catch up on your technical terms and sayings with the illustrated Photonics Dictionary. The Dictionary is part of a four book set that also includes a Corporate Guide, Buyers Guide, and Design Application Guide. The Application Guide gets deep into imaging mensuration, coding and compression - great ideas for class projects.When I brought this set of books to a MAS meeting, the young adults and computer buffs had a hard time putting them down. Now that the MAS has purchased electric eyes for the large telescope, this is the perfect set of books. (Donated by Dorothy and Jim Kube)

– Jim Kube

LeRoy Simandl Passes Away

This summer, MAS was saddened by the loss of LeRoy Simandl, a true friend and dedicated member of the Society. LeRoy served as Focal Point editor for over two decades. At the May meeting, LeRoy received a standing ovation and a plaque in recognition of his service to our Society. Our condolences to Florence and the Simandl family.

1990 Picnic - Fun, and Guess What – No rain!

Well, almost no rain. 147 raindrops fell the minute the grills were lit, but never amounted to anything serious. So the 1990 MAS Family Picnic was enjoyed by a dry and happy group. Special thanks go to the door prize sponsors:

• Orion • Televue • Seeing Double • Chest Works • Peter Smitka • Milwaukee Map • American Scientific • F&W Telescopes • Lumicon • Caledonia Graphics • Innovative Energies, Inc • Astro Cards Roger Tuthil • Spectra Astro Systems

Note: A few prizes arrived late and will be awarded at the September meeting.

Greenbush—Andromeda

Our fall Greenbush Star Party and campout will take place on Friday - Saturday October 12 - 13 Greenbush Kettle Morraine, campsite #5 & #6. A waning moon will allow the Andromeda Galaxy to glitter along with other autumnal delights. Bring your tent, telescope and firewood. Please call Paul Borchardt one week in advance if attending. Campers must pay $2 per day per person plus vehicle registration ($3.50 per day or $14 annual sticker). For more info, contact Paul at 781-0169.

New Members

The follwoing new members were recently announced by the MAS Board.

Ron Fintak, Jr. – Whitefish Bay

Martha Kelty – Milwaukee

J. Kent Nilsson– Sheboygan

David L. Vollmar – Elm Grove

Martin C. and Joanne Brunet, Jr. – Waukesha

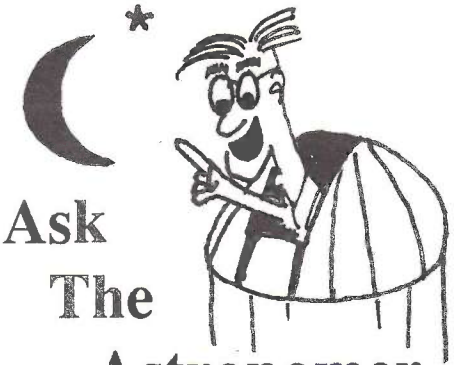
The Society extends them all a big welcome! When you see them at a meeting or other event, introduce yourself!

Asteroids You May Know

Congratulations to members Richard Berry and David Eicher for the honor recently bestowed to each by the International Astronomical Union for their work in promoting amateur astronomy through published works including: Astronomy and Deep Sky Magazines. The I.A.U. has given permanent names to two newly discovered asteroids; henceforth the new asteroids will be 3684 Berry and 3617 Eicher.

Dues are Due!

See attachment for renewal info.



Ask The Astronomer

Most distances in the sky are measured in degrees except for the right ascension of a star, which is measured in units of time: hours, minutes and seconds. Why is this?
– Running Late

Dear Running,
Present methods of determining positions on a sphere go way back to Greek geometers, who used two sets of imaginary lines, one running east to west and the other north and south. On the Earth, we use a system of latitude and longitude lines to determine positions on the globe. Both are measured in degrees. On the celestial sphere, things are different. Latitude (E-W) in the sky is called declination and measured in degrees, while longitude (N-S) is called right ascension in units of clock time.

One reason is the positioning of the Sun relative to the stars, which are not visible during the day. One method was to time the passage of the Sun, then at night a star, across an imaginary line running due south, called the meridian. The time difference determined the angular distance hence the Sun's position among the stars. This method is still in use today. In the days before machines counted for us, why bother with an error-prone calculation. Leave the position in units of time! Not everyone is an Einstein and most people hadn't even heard of him in those days!

Another reason is the nature of right ascension lines themselves. At the celestial equator, hours of right ascension are 15 degrees apart but meet at the north and south celestial poles. So the angular distance is not the same everywhere! The angle is related to the cosine of the distance from the equator. Can you imagine someone without a computer or calculator trying to calculate the cosine of an angle? I'd keep the measurements in time, wouldn't you?

nothing SPURious about those TEXAS skies

– by Dorothy Kube

At last the long drive was over. We drove our RV (packed to its Chandrasekhar Limit) through the gates of Prude Ranch in the Davis Mts. The Texas Star Party beginning on May 21 would continue for a week-long astronomers' dream.

After checking in, we proceeded to set up our scope. Not long after that, one of the ranch dogs came over and began claiming his territory on the scope base. He was chased away before any damage was done. We hoped this was not some kind of omen.

Every style and size of scope imaginable was poised and ready. The largest was a 25" Dobsonian. A 17.5" diameter binocular scope had a steady stream of curious viewers. Technology varied from computerized equipment to a poorman's Telrad consisting of a block of wood taped to the scope with paperclips for sighting.

The near 100 degree daytime temps kept the nights mild enough for light clothing. And those nights! Just when you thought it was dark, it got darker. Some familiar constellations became hard to pick out among the unbelievable amount of background stars. The Milky Way actually cast a shadow on a piece of paper. A very beautiful portion looked like steam coming from the spout of the Teapot. It had a greenish hue like a swatch of Northern Lights. Fainter patches seemed to boil over onto Scorpius' tail. Of course, the first thing I had to see was Omega Centauri. As always, its hypnotic spell kept my eye glued to the scope. The 30.6 latitude and mountain ridges kept the Southern Cross and Jewel Box just out of reach.

Comet Austin made up for that. On May 20 it was below Delphinus at about 5th mag. and 10 arcminutes in my 24mm wide angle eyepiece. Looking like a fuzzball, it had a brighter dot on the left which seemed like a nucleus. No tail

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Saturday Nite Keyholders

September 15	Terry Ross 784-2093
September 22	Frank Roldan 608-787-1730
September 29	Tom Schmidtkunz 784-0253
October 6	Peter Smitka 785-0926
October 13	Virgil Tangney 327-7976
October 20	James Toeller 352-7144

was discernible. By May 25th, it had already crossed over most of Aquilla. Clouds and haze prevented anymore tracking.

Skies threatened all week, but were never completely overcast. One big storm sent everyone scurrying for their equipment. Most of those clouds cleared early, but all night continuous lightning could be seen at a distance behind the ridges. Despite the clouds, I still managed to bag some NGC objects and had fun entering them in the Observing Olympics. All entrants received certificates. The low humidity did not contribute to good seeing. Stars twinkled more than at home, but the dew guard was never needed. It was so dry, dust got into everything. One breezy day, a dust devil swirled across our camping area. Luckily it was a tamer one.

A rare opportunity was a chance to view the Sun. A C-8 with a 3" light cap and a H-alpha DayStar filter with heat rejection passed light in a band 0.5 angstroms wide showed a red image. An 84 degree field, wide scan 32mm eyepiece showed grooves, sunspots of various sizes, and prominences. Surprisingly, prominences along the solar limb never moved. It was like a photograph. A 4" refractor with a Thousand Oaks mylar fluoride

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filter gave a yellow solar disk image which showed many sunspots very clearly.

There were over twenty speakers. Ray Villard brought new Hubble CCD images that showed the amazing separation of two stars. A ground-based comparison image from Palomar revealed no separation. The information and actual photos about the Soviet Manned Lunar Landing program were shown to us by Robert Reeves. He indicated that the Soviet race to the Moon was almost a suicide mission. Because of technical failures, and with internal political and scientific conflicts, the government actually collected all lunar equipment and destroyed it with a pile driver to end the squabble. This information became known through the Perestroika agreement.

David Levy found a new comet shortly before the actual start of the TSP and earned $50 instead of the $500 if found during TSP. After authentication, of course.

In a mufflerless bus provided by the ranch, out tour group wound its way up to the 6,800 ft. peak of Mt. Locke, the home of McDonald Observatory. After brief tours of the 30" and 36" scopes, we stood in humility at the base of the 107" scope. It loomed above us as did the 200-ton steel dome. Because it is so well balanced, all of the scope's 160 tons of moveable parts are driven by a 3/4 HP motor! The spectrometer alone takes up most of the third and fourth floors. Since it was a work day, the scope was repositioned periodically. Each time, a very loud alarm would sound to warn of the movement. Air-conditioning kept the dome evenly chilled. The other floors and buildings were not accessible to visitors so we boarded the bus, made a short stop at the visitors' center and headed back down.

Our last night was clear, but since we were all packed and ready to leave, we looked through other scopes. With the very strict lighting ban, we carefully threaded our way through the electric cord octopuses serving the tent areas. While saying our goodbyes, plans for next year were already coming to mind.

Last but not least, on our way home we unexpectedly came across a sign in Greensburg, KS advertising the world's largest (to date) pallasite meteorite. We couldn't pass that up. We followed the signs to the Celestial Museum, which is under the auspices of their Chamber of Commerce. The building was small, tucked away on a residential street. The meteorite was displayed in a glass case and was about 3 x 2 x 2 ft. weighing approximately 1000 lbs. It was found in January 1949 under 63" of soil on the Ellis Peck farm, located near the town, using a device similar to a mine detector. It had not been seen when it fell. This farm is called the 'meteorite farm' because 7,000 meteorites have been found in two square miles. Driving away, these highway wanderers said goodbye to a space wanderer.

Astronomy Class

UW Waukesha is holding a class entitled "Astronomy with Telescopes" at the Observatory on four Wednesdays (Oct. 10,17,24 and 31) 6:30 to 8:30 p.m. Class topics include care and use of a telescope and how to find things in the sky. Class participants may bring their own telescopes or use those at the Observatory. Fee for the class is $45, but a discount is available for MAS members. To register, contact Don Bracco 521-5460. Questions, contact Lee Keith, 961-8752.

Mesopotamia Knights

Member John Wiesen, who serves in the US Air Force, is currently stationed in the crisis ridden Middle East. We wish John, and all his compatriots, a safe and successful mission. Then, the desert sky which revealed all its secrets to ancient astronomers can give way to modern stargazers, who like John, can revel in the same star-studded sky.

MAS INFORMATION

MAS OFFICERS

President	Dr. Richard Wiesen 781-4786
Vice President	Matthew McNeeley 354-5347
Secretary	Dorothy Kube 453-8858
Treasurer	Dan Koehler 662-2987
Obs.Director	Gerry Samolyk 475-9418
Ast. Obs. Director	Paul Borchardt 781-0169
Librarian	Mrs. Sally Waraczynski 321-0918
Assist. Librarian	Mrs. June Regis 962-0896
Program Dir.	Tom Renner 392-2799

FOCAL POINT Staff

Matthew McNeeley (Editor)
8200 N. Cedarburg Road
Brown Deer, WI 53209
354-5347

Tom Gill (publisher)
1391 N. 72nd Street
Wauwatosa, WI 53213
476-6986

MAS Observatory

18850 W. Observatory Rd.
New Berlin, WI
542-9071