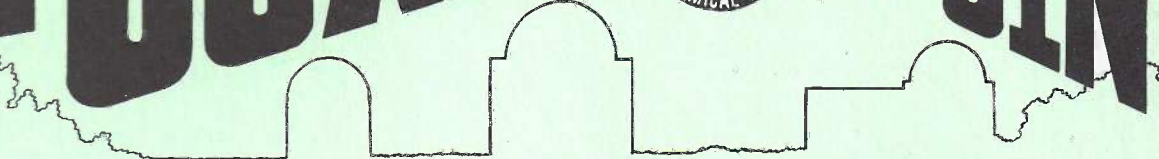



FOCAL POINT



Issued by the
MILWAUKEE ASTRONOMICAL SOCIETY

- : DECEMBER, 1985 : -

CALENDAR:

Mon., Dec. 16 - Board meeting 7:30 P.M. (Dr. Wiesen).
Fri., Dec. 20 - December Program-Meeting, 8 P.M.
Wed., Dec. 25 - Merry Christmas!
Fri., Dec. 27 - Full Cold Moon.
Wed., Jan. 1 - Happy New Year!
Wed., Jan. 1 - Comet Halley crosses Earth's orbit.
Wed., Jan. 1 - January FOCAL POINT deadline.
Saturdays - Observatory maintenance and improvement.
Sat. Nights - Member's Night at the observatory.

DECEMBER PROGRAM-MEETING:

The serious and profound study and application of astronomy requires an in-depth knowledge of physical science and high-powered math. And this discourages many people from enjoying the many wonders in the sky.

But, fortunately, a heavy background in science is not necessary to enjoy this fascinating science. You can observe from your backyard with unaided eyes.

With the development of special effects, computers, and high tech, more people are becoming curious about the how and why of things. The MAS December Program will highlight Mr. Greg Vogt, Executive Director of Milwaukee's Discovery World. Discovery World is a hands-on science technology museum located in the west wing of Milwaukee's downtown Central Library. It has nearly 100 exhibits and experiments that may be manipulated by visitors. The exhibits cover science, technology, electricity, machines, light, color, space exploration, sound, economics, and motion.

Mr. Vogt's presentation will explain Discovery World and the opportunities it offers for informal science, economic, and technological education.

WHEN: Friday, December 20, 8 P.M.

WHERE: Child and Adolescent Treatment Center (CATC) auditorium,
9501 W. Watertown Plank Rd., Wauwatosa. May be reached
by Rt. 71 bus. There is ample free parking.

IF YOU HAVEN'T PAID YOUR DUES, please try to do so in the near future so Treasurer Jim Toeller can reorder your "Sky and Telescope" magazine. You may miss issues otherwise.

You'll find a dues form with this issue.

COMET HALLEY UPDATE: On Tuesday, November 26, at 10:39 P.M. CST, Comet Halley came within about 57,566,500 miles of Earth, its closest approach to Earth as it speeds towards the sun. It will cross Earth's orbit on New Year's Day.

Very sizeable crowds of interested comet seekers showed up at the lake front Gun Club grounds Sunday night, Nov. 17 and at Whitnall Park, Fri. Dec. 6. Everyone present had a chance to see the comet as a dim, fuzzy tuft of ice and gas on about the only decent nights, weatherwise, we had in quite a while. Thank you, Mr. Halley. Dan Koehler gave the MAS some good publicity in his interviews with the very cooperative local TV stations.

William Thomas, MATC astronomy instructor, says the best times to see Comet Halley in Wisconsin are Dec. 1-15 this year, and Jan. 1-25, March 8-21, and April 2-13 next year. More advice - use a binocular - 7x50 preferred. If you use a 'scope, use your lowest power eyepiece.

According to Jack Horkenheimer, Executive Director of Miami's Transit Planetarium, south Florida from Miami to the keys will offer the best viewing in continental United States. March and April should be the best viewing months. Call the greater Miami and Beaches Tourism Council at (305) 673-7070 for comet viewing information.

The Dec., 1985 "Sky and Telescope" shows Comet Halley's route from Dec. to mid-January on page 551. Dec., 1985 "Astronomy" shows the comet's path from the end of Dec. through January on pages 32-33.

An excellent booklet, "Mr. Halley's Comet," is available from the MAS for \$1.00 (mailed for \$2.00 postpaid). Call Jim Toeller at 352-7144.

COLD WEATHER OBSERVING TIPS: (Selected from an article by Donald Gallian in the Chicago AS "Observer").

Dress properly. You must keep your head warm with a wool hat or a hooded jacket or parka. Your body loses almost half of the heat it generates if your head is uncovered.

Regular shoes or boots are not warm enough. Best protection is a pair of "moon boots." Second best is a pair of boots with felt liners, but these are somewhat heavier.

Heavy mittens are the warmest, but you will not be able to change eyepieces or make small adjustments. Gloves offer dexterity, but they are not as warm.

Do not be fooled by warmer weather. Carry a warm hat and coat just in case the temperature drops. This also applies in summer.

Practice finding objects with your telescope at home if you plan to observe elsewhere. Make a list of everything you plan on taking. Don't leave a tripod leg at home.

Dew caps are MANDATORY for refractors or Schmidt-Cassegrain telescopes. You can make them. They should extend at least one tube diameter. A dew cap also prevents dew formation on the diagonal in a Newtonian. A car window defroster that runs on 12 volts from a car cigarette lighter will keep optics clear.

OBSERVATORY NEWS: Here is the big moment we've been waiting for: the 26" telescope building has been approved by the New Berlin building inspector!

We've come a long way since the groundbreaking ceremonies on National Astronomy Day, April 26, 1980. Now more attention can be focused on the telescope, which, while useable, needs some finishing touches.

The observatory facilities have been winterized and minor maintenance will continue, weather permitting. Please keep the washroom doors closed. One toilet has been lost owing to freezing. Furthermore, doors left open cause the heaters to run, resulting in an astronomical electric bill.

John Asztalos has built a hypersensitizing chamber. He will hypersensitize film for \$2 a roll. The money will be deposited in the Society treasury.

TO BE INTRODUCED at the next meeting are new members George Ceolla, Brookfield (rejoined); David Eicher, Milwaukee (rejoined); Joseph and Christine Hynes, New Berlin; James Reich, Arlington Heights, Illinois; Cory Reinbold, Wales.

OUR NEW HISTORIAN is Sally-Jo Trummer who recently joined the Society. If you have any historical articles, pictures, or memorabilia pertaining to the MAS, forward them to her at 935 N. Greenfield Av., Waukesha, Wis. 53186 (549-1124).

THANKS to member Tom Berken for auditing the Society's books.

A NOTE FROM LEE KEITH: I would like to thank John Asztalos, Terry Ross, Brian Cieslak, and Gerry Samolyk for helping me make last autumn's "Amateur Astronomer's Series" classes the most successful thus far. I could not have done it without them! I know that the people that attended the classes would like to thank them too for sharing their knowledge and expertise with them. These classes fulfill one of the Society's purposes, to "promote the study of astronomy."

For those who missed the classes, they will be repeated again next fall, along with the classes on astrophotography, comets, planets and variable stars. See you next fall!

MESSIER, HERSCHEL OBJECT SEARCH: Sixteen members are now working on Messier lists. Dale Tutkowski has done it twice. He has also recorded meteors and double stars. Dale used a 6" reflector and has received his third certificate.

MAS member R. Dennis Horvath holds certificate number 13 for having observed at least 400 Herschel objects. He received recognition for the feat in May, 1984 and has since added another 152 Herschel objects.

Dennis made his observations through his home made 10" f/5.6 Dobsonian without setting circles as recommended by the Ancient City Astronomy Club of St. Augustine, Florida, who compiled the listing.

This is no small endeavor considering Herschel objects in general are more difficult to find than the Messier objects.

GRAZING OCCULTATION:

<u>NIGHT OF</u>	<u>MAG.</u>	<u>TIME</u>	<u>% SUNLIGHT</u>	<u>CUSP ANGLE</u>
Dec. 15-16	6.0	7:15 p.m.	35	15.9S

This graze is rated favorable. For details call Virgil Tangney (327-7976).

THE BOARD OF DIRECTORS will meet Monday, December 16, 7:30 p.m., at the home of Dr. Richard Wiesen, 4305 Cherokee Dr., Brookfield.

<u>METEOR SHOWER</u>	<u>PEAK DATE, TIME, AND RADIANT DIR.</u>	<u>MOON AGE</u>	<u>PEAK RATE/HR.</u>
Geminids	Fri., Dec. 13, 1 A.M., from South	2d	50-80
Ursids	Sun., Dec. 22, 4 A.M., from North	11d	10-15
Quadrantids	Sat., Jan. 4, 4 A.M., from North	24d	40-150

Best viewing is between midnight and dawn. Peak rate may occur several days before or after maximum. On any normal night, an observer should see from 5 to 10 meteors per hour.

FOR SALE: Magazine subscriptions, at reduced rates, through your Society.
Ideal for Christmas presents.

ASTRONOMY - 12 issues, \$12/yr. (General astronomy).

DEEP SKY - 4 issues, \$7/yr.

TELESCOPE MAKING - 4 issues, \$7/yr.

OBSERVER'S (CANADIAN) HANDBOOK - \$6.50 per copy (Published annually).

ODYSSEY - 12 issues, \$10.00/yr. (For children).

"MR. HALLEY'S COMET" - \$1.00 per copy, mailed for \$2.00 postpaid.
(Comet observing guide and other useful information).

Please call Jim Toeller at 352-7144.

The Society needs several more subscriptions for ODYSSEY to get the minimum rate from the publisher. Please order now.

MERRY CHRISTMAS AND HAPPY NEW YEAR! The Milwaukee Astronomical Society Officers and Directors wish everyone pleasant holidays and fulfilled hopes for the new year.

MEMBER'S NIGHT KEYHOLDERS:

Dec. 14	G. Samolyk	475-9418	Jan. 4	R. Berry	442-4267
21	T. Schmidtkunz	784-0253	11	P. Borchart	445-1181
28	H. Auchter	542-2158	18	W. Collins	255-4169

Brian Cieslak (679-9663) is in charge of scheduling special programs and tours at the observatory.

DIRECTORY:

President - Daniel Koehler - 662-2987

Vice President - Dr. Richard Wiesen - 781-4757

Prog. Chairperson - Thomas Renner - 1-392-2799

Secretary - Brian Ganiere - 258-5626

Treasurer - James Toeller - 352-7144

Observatory Director - Gerry Samolyk - 475-9418

Asst. Obs. Director - John Asztalos - 258-5626

FOCAL POINT Editor - LeRoy Simandl - 933-3052

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

JANUARY FOCAL POINT DEADLINE - WEDNESDAY, JANUARY 1.

HOW GREAT IS THE WONDER OF HEAVENLY AND EARTHLY THINGS.
(Marcus Cicero)