



Issued by the

Milwaukee Astronomical Society

April 1989

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NO April Program-Meeting

No April Program-Meeting will be held this month. The 1989 Spring Field Trip to Madison will be its replacement.

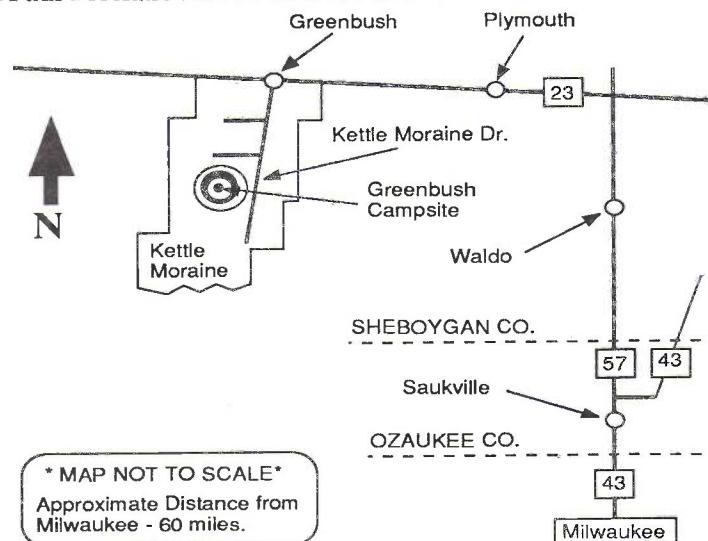
Please return the 1989 Spring Field Trip form with your remittance to Program Director Matt McNeeley as soon as possible. Call him at 354-5347 for the latest information since space is limited. All details were given in the flyer included with the March Focal Point.

Greenbush Campout

Greenbush campers may again join the Star Party campout at Greenbush Kettle Moraine campsite #6. When? Friday through Sunday, May 5 through 7. The moon will be new, so enjoy a dark hopefully clear sky and see some stars. And some shooting stars since the Eta Aquarids should be at maximum of 10-40/hr at that time.

Bring your tent, telescope, warm clothes, and firewood. Please call a week ahead of time if you are going.

One little black cloud! Campers must pay \$3.50 plus \$2/day/person. Call Paul Borchardt at 781-0169 for details.



Calendar of Events

- Saturday, April 15 ----- Moon close to Regulus.
- Monday, April 17 ----- Board meeting.
- Thursday, April 20 ----- Full Pink Moon.
- Saturday, April 22 ----- MAS Madison Field Trip and Focal Point Deadline.
- Saturday, April 29 ----- NCRAL Convention at Rockford, Illinois.
- Wednesday, May 3 ----- First Wednesday at the observatory, 7:30 pm. All members and their guests welcome.
- Friday-Sunday, May 5-7 --- Greenbush Campout.
- Saturday, May 13 ----- Astronomy Day.
- Saturdays ----- Observatory maintenance and improvements. Help wanted. Call Gerry Samolyk at 475-9418, John Asztalos at 547-3400, or observatory at 542-9071.
- Saturday Nights----- Member's night at the observatory.

Coming Events

The Texas Star Party at Prude Ranch near Fort Davis, Texas. Observing, papers, guest speakers. May 29 - June 4. For information, write:

TSP Registrar
Dept. S.
P.O. Box 386
Wylie, Texas 75098

The North Central Region of the Astronomical League (NCRAL) Convention at Clock Tower Inn, Rockford, Illinois. Talks, tours, something for everyone. For more information, write:

Carol Beaman
6804 Alvina Road
Rockford, Illinois 61103
or call
(815) 962-6540.

A Real Challenge!

Messier Marathons seem to be gaining in popularity. The Neville Public Museum AS in Green Bay, Wisconsin and the Lehigh Valley Amateur AS in Allentown, Pennsylvania, to name two societies, are organizing all-night Messier observing marathons. At this time of year it is possible to view all or most of the 101 unusual objects on the same night while observing from dusk to dawn.

The Neville Society rules include:

- 1) "M" objects must be located through a telescope by star hopping - No CAT systems.
- 2) Reference books and maps are allowed.
- 3) Object and time observed must be recorded in Universal Time (U.T.).
- 4) Any size of 'scope is eligible. (All "M" objects were discovered using a 3" telescope).
- 5) Regular certificates are awarded to those observing at least 70 "M" objects. Honorary certificates are awarded for finding all 101 objects.

Bob Mohr and John Malkner of the Lehigh Valley Society will pit a CAT system against star-hopping.

Good Luck!

Library News

How appropriate it is that as Leo and Virgo, "home" to swarms of the faint fuzzies, wheel into view, we have the opportunity to feast our eyes on "GALAXIES" by Timothy Ferris, 1982.

Galileo confirmed that the Milky Way was indeed a massive gathering of individual stars, but it was not until the 1920's that the giant telescopes in California began to reveal the true nature of things. Not only was our sun not in the center of the Milky Way, but our galaxy was only one among countless such "island universes".

Ferris takes us along on an imaginary journey deep into our home galaxy to explore the phenomena of star birth and death. Then we acquire a series of new perspectives as the space ship carries us out among the members of the local group and on to where the crew can discern the structure of our supercluster. This delightful voyage is accomplished through a tapestry of absolutely dazzling observatory photographs and a narrative which instructs with elegance and simplicity.

Many, many thanks to Tom Milner for donating this treasure to our library.



Nolan Zadra has the honor of being the first contributor to our 1988 Mars perhelion-opposition slide collection.

And, while we're on the subject of slides, please use the green sign-out sheets on the closet door when borrowing audio-visual materials. It is difficult to trace their whereabouts in the logbook.

A Note of Thanks by LeRoy Simandl

Thanks to the efforts of librarians Sally Waraczynski and June Regis, many contributing members, and pursuance of the MAS policy to further astronomy through word and deed, our library is fast becoming one of our most important facilities. Our members may now avail themselves of slides, up-to-date books, pamphlets, and other reference material pertaining to astronomy as well as science in general.

Use of this varied material in conjunction with proper use of our many telescopes and related equipment and combined input of many of our knowledgeable members dedicated to astronomy as a hobby or profession should allow any member to attain the level of amateur astronomy or degree of satisfaction he or she wants to attain, from looking at stars to seeking what and why they are.

Observatory News

Robins are here so spring is just around the corner. It's soon time to pick up and clean up at the observatory inside and out. Please bring equipment. Ladies invited.

Please drive and park on the roads or parking lots. The grounds become soft as the frost leaves.

Gerry and John, your observatory directors, will soon have lists of things that need to be done. Pick your task and your time.

Astronomy Day will be observed Saturday, May 13. The MAS will host the general public, rain or shine. We will need traffic controllers, guides, speakers, and 'scope operators. Extra help can spell other workers. Use your instruments or ours.

Our Open Houses in the past have suffered owing to lack of help. The long lines caused some discomfort and disinterest so many disgruntled guests soon left.

Don't Pack the Pantyhose! by Dorothy Kube

What's going on? Has the car compass frozen? These "up-north" Wisconsinites were actually heading south! My husband Jim and I were on our way to the Southern Cross Astronomical Society's Fifth Annual Winter Star Party being held February 2nd to 5th on Spanish harbor key in Florida.

Our usual summer vacation constellation friends would not be keeping us company on this trip even though the weather would seem otherwise.

As the miles rolled by, signs of climate change were becoming evident. No more ice on ponds or puddles. The coats we started out with were now left in the car when stopping for gas.

Anticipation was rising higher along with the declinations of Orion, Sirius, and the other "faces" of winter. Each night the temptation to stay up and view was forced back knowing we would be on the road before dawn. Our telescope in the back of the station wagon seemed to rattle and quiver over bumps more than usual as if the anticipation was catching. But it wouldn't be long now. Palm trees were waving at us and we've changed to summer clothes.

On Thursday, with the temperature in the 80's, we settled our trailer into a site at Big Pine Key Resort that would be home for the next four days. We took our scope and drove over the bridge to Camp Sawyer, a Boy Scout camp, on Spanish Harbor Key. We signed in, got our ID's, t-shirts, various information, then proceeded to pick our spot among the array of scopes already there. From huge 20" scope with vans for carting them to binoculars on tripods. A special area for astrophotography was shielded to keep out most of the light. Throughout the Star Party it was made known mighty fast over the speaker and by shouts if a stray beam of someone's light went that direction.

Our 13.1" Odyssey was set up quickly as it was almost dark. At 24.4° latitude, we had to bend our heads back to see Betelgeuse. I picked the easy target of Orion's sword, looked through the 24mm wide-field eyepiece and call to Jim that we were going to need the dew guard. Dismayed, I looked again and was wonderfully surprised. What I thought was dew around the stars was he very bright nebulosity which spread out in areas usually undetected near cities. Trapezium had clarity and vividness that leaped out. no dew guard was ever needed despite all that water surrounding us. Each night temps stayed in the 70's and only a light jacket was worn when breezy. No bugs either.

Trying to recover from the grandeur, I got to work and bagged more than a dozen Messier objects, including the spiral beauty M83. The arms were slightly visible. Reluctantly, the evening was cut short having to travel most of the day.

Friday night, about 1:00am to 5:00am EST, was worth waiting for. The sky was perfectly clear, dark, and the seeing was excellent. Starting with the Keyhole nebula, a naked-eye glow 1.5° wide. A 16mm eyepiece resolved the "keyhole" as a dark space with grayish nebulosity arching over and spreading to the sides. At 1:30am it was on the meridian at 5° above the southern horizon. The open cluster Jewel Box, just southeast of B-Crux, had stars of blue, yellow, red, and white with the main stars arranged like a tiny Orion minus one corner star.

With a thin strip of clouds on the horizon, we were fortunate to see the entire Southern Cross. At its meridian at 3:30an of 3° above the horizon, Acrux kept slipping in and out of the clouds. Three of the brightest stars in the sky are in this constellation and it would easily fit in the bowl of the Big Dipper. The Coalsack would elude us because of the clouds.

The best was yet to come. Omega Centauri, a globular cluster thought to have over one million stars reached the meridian at 4:30am, 18° above the horizon. Naked eye at 4th magnitude, it covered 1/2° of sky. Using the 16mm eyepiece, the core covered 3/4 of the field, having to sweep the surrounding area to see the entire object. If the power of the universe were rolled into a ball, this is what it would look like. The core had variegated shades of light, like pieces of frosted glass stuck onto the surface. I could almost feel the heat. It was hard to take your eyes off of it. While trying to glimpse Centaurus A, our Utopia came to an end with the first light of dawn. We then headed back to the trailer getting to bed as other campers were getting up.

Throughout the days lecturers included: Jack B. Newton, Donald C. Parker M.D., Michael D. Reynolds, Tippy D'Auria, David J. Raden, Jeff Beish, Marvin L. White, Dr. Lester Shalloway, and David Brewer. Our misfortune was the lack of time to hear all of them. Our thanks to S.C.A.S. and Tippy D'Auria for a pleasant, well-run party.

Saturday, our last evening of viewing was hampered by slow-moving groups of clouds. This spare time was used to talk with fellow participants and view through other scopes. That could take another 4 days, as the group seemed to be near the 350 registration limit. Climbing atop a ladder at a 20M scope enabled us to see the nova in M66 in Leo. It was brighter than the core of M66 with an increase in magnitude from the previous day. To add to the excitement, the Navy launched a Trident missile off Cape Canaveral and its emission trail could be seen from our Key.

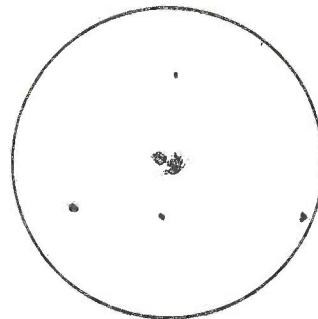
Noticing the sky in general, the handle end of the Big Dipper would drag along the horizon. Canopus fooled me every time. It was in the same area Sirius occupies in northerly latitudes. Scorpius was poised on the tip of the curved of its tail. Stars formed a snout making it look like a seahorse. At its "knee" was an optical cluster of stars like babies clinging to their mother. Not even the midnight drawing of door prizes could compare to all of this.

Sunday was packing day, for saying good-bye, and seeing our last Key West sunset. We left early Monday morning, with life in reverse. Soon warmer clothes were needed, then the addition of coats. Scattering of snow was more abundant and ponds were frozen. A snow storm was forecast for the Wisconsin area. Thinking of the icy roads literally rubbed salt into our "leaving Florida" wounds.

What will tide us over the winter months will be the warmth of people we met and memories from our new treasury of star friends.

Herschel Club's Finest Heavenly Bodies by Lee Keith

Designations: NGC 2371-72, H3162
Specifications: Bi-Polar Planetary Nebula in Gemini
(Epoch 2000.0) RA: 7h 25.6m • Dec: +29° 29' • Size: 54"×35"
Mag. Nebula: 13.0 Mag Central Star: 12.5
Location: 2.3° SW of Castor
R. A. Sweep: From Castor: Sweep 1.75° south, 1.5° west.



REFERENCES:

Webb Society Deep Sky Observer's Handbook: Vol 2, p. 62

Two nebulous patches in contact, SE the brighter; easy object even in slight haze. (8.5" scope) Distance 1.7 kpc (5500 light years)

Observe the Herschel Objects: Pub. by the Astronomical League, p.17

No separation evident between the two planetaries, appears elongated, effect of separation is improved by sweeping the field, off white in color. (6" Dynascope, 48x and 96x)

Amateur Astronomer's Catalog by Ron Morales, p. 67

Obvious pale green nebula. Small with two bright nodules almost in contact. Reminds me of M76. (10" f/5.5 86x) Western nodule slightly brighter than eastern nodule. A slight wedge of darkness separates the two nodules. (137x) Also seen with a 6" f/8 at 48x.

The Observer's Guide, No. 11 Nov/Dec 1988 p.32

Bright, elongated nebulous with two round knots about 10" in diameter. There is a fainter haze between and surrounding both knots. The W knot is slightly brighter. It has an appearance similar to M76. (14.25" f/4.5 168x) A medium sized and spectacular object. It is oval shaped and elongated 2:1 with the ends of the ovoid much brighter appearing like cusps. The N cusp appears slightly brighter and larger. (12.5" f/5 330x)

Burnham's Celestial Handbook, Vol 2, p.911

Bright, pretty large, elongated, brighter middle nucleus; mag 12.5 with [type] F central star; diam 50" x 30"; brighter ends produce appearance of double nebula.

Pluto at Its Best

Pluto will star in early May and be at its best in 248 years!

Discovered on March 12, 1930 by Clyde Tombaugh, the strange little planet and its comparatively huge moon Charon will reach opposition on May 4. It is now closer to the sun than Neptune. This will remain true until 1999. It will be on the meridian at midnight.

Pluto lies on its side as does Uranus. It has not yet orbited the sun once since our country has become a nation! At magnitude 15, it can barely be seen with a 6" telescope. Pluto was seen last June by observers using 8" and 10" Schmidt-Cassegrain reflectors by careful viewing over several nights to note a "Star" that moved. The Ottewell 1989 Astronomical Calendar, page 50, has a finder chart. On May 4, Pluto's position will be approximately at 15h 3m RA and -0° 15' DEC.

Keyholders

April 15 Jim Toeller 352-7144
April 22 Richard Wiesen 781-4757
April 29 John Asztalos 547-3400
May 6 Frank Roldan 423-0210
May 13 Greg Cieslak 744-5703
May 20 Brian Ganiere 272-4649
May 27 Chris Hesseltine 482-4515
June 3 Dan Koehler 662-2987

For Sale

J. C. Penny 135mm f2.8 telephoto camera lens. Screw mount for Pentax screw thread. \$25.00. Please call Paul Borchardt at 781-0169. (Brookfield).
C8 Celestron cassegrain reflector. Lots of extras including carrying case. \$1,000 for everything. Please call Steve Westmore at 481-5039. (St. Francis).

Directory

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Meteor Showers

LYRIDS - April 21. Peak at 4 am. Rate of 10-15/hr. Look south.

ETA AQUARIDS - May 4. Peak at 4 am. Rate of 10-40/hr. Look southeast.