

# THE PRAIRIE ASTRONOMER

Volume 18, Number 2

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## BULLETIN FROM ASTRO LEAGUE ANNOUNCEMENT SERVICE...

On Saturday morning, 28 January 1978 the magnitude 9.0 minor planet (7) Iris will occult the magnitude 9.1 AGK3 star +2 1358 through much of the northern United States and Canada. The precise path is still uncertain and observations are requested from all areas. The event will occur at 0105 UT on the East Coast and 0112 UT on the West. Iris is 209 km in diameter and is 1.43 AU from the earth. The star is type K0 and is at RA 10h 10.4m and Dec. +2 deg. 36 min. (1950). If the occultation occurs, the combined light of the two will drop 0.7 magnitude for up to 22 seconds. The elongation to the sun is 155 deg. and to the moon is 22 degrees. The moon is 84 percent waning.

## OBSERVE MANUALS ARE ON ORDER

Members who have expressed an interest in the Astronomical League's near-classic publication, OBSERVE: A GUIDE TO THE MESSIER OBJECTS will be interested to learn that we have placed an order with the League for a new supply. When they arrive, the price will be \$2.00 each. For first-time skywatchers, the guide is an ideal way to learn both the sky, and the discipline of observing. The manuals will be on sale at club meet-

ings when they arrive. Hereafter, we will strive to keep a supply of them on hand because they are perhaps the single most popular publication of the League.

## JANUARY MEETING ANNOUNCED FOR HYDE OBSERVATORY

*The January meeting of the Prairie Astronomy Club will be held at Hyde Memorial Observatory Tuesday evening, January 31, at 7:30 p.m.*

*Rick Johnson, our club president, has been snapping off astrophotos for a long time. He knows where the pitfalls are, because he's fallen into practically every one of them at some time. He'll be showing some of his slides--the really good ones (which is what most astrophotographers show you--never the mistakes). If we're lucky, he might also show the tries that failed and tell us why. One of the questions we get alot from newcomers to the observatory is, "Can you take pictures through these telescopes?" The answer is yes!... and Rick will show us just how good those pictures can be Tuesday night.*

*Also, both the ASTRONOMICAL CALENDARS and OBSERVERS HANDBOOKS have now arrived. Some of those who ordered have already purchased their copies while tending to the public nights at the observatory.*

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THE PRESIDENT'S REPORT

Work on the observatory has continued, though slowed somewhat by the holidays. The dirty optics on the eight-inch Cassegrain have been cleaned. There are a couple of stains that resisted cleaning, but they will not affect the performance of the telescope. Larry Stepp has continued to work on the clock drive for the club scope. Apparently, the present drive motor doesn't have sufficient power and must be replaced.

We have many new members in the club. As new members let us know what you would like us to cover in the monthly meetings. Would you like to give a program? If you are especially interested in a topic, but don't know how to get started, I can pair you up with a longtime club member who is also interested in your topic and together you can work up a program for the meeting, and/or for the observatory slide shows.

There is much work, physical and mental, mostly physical if I know this group, to do on the solar project. I'd like to see the new members get involved. Don't be afraid about not knowing what you are doing. Walt and Jeff knew absolutely nothing about mirror making when they started to make the mirror for the club telescope. Along the way they made some horrid mistakes no other mirror grinder ever thought of making! Yet they ended up with a first class mirror that outperforms many commercial mirrors I have seen. There is no better way for you to get acquainted with club members than to get involved.

Lee Thomas, our Treasurer, informs me that we received at the end of December, a check for \$70.00 from the Lincoln Foundation from memorials to Jess Williams. After Lee's report on the pathetic condition of our treasury we received several monetary gifts from some of our longstanding members. Thanks to these contributions plus the influx of new members, the club treasury is now back on its feet again. My thanks to those who made these contributions. It's a pleasure to have such loyal members.

The Observer's Handbook and the Astronomical Calendars are in and will be sold at the January meeting on a first come first served basis. I doubt that there will be any left after the meeting, so if you want one or both of these publications, be sure to attend the meeting.

We have ordered, but not yet received, 10 Observers Guides. They

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THE PRAIRIE ASTRONOMER is published monthly by the Prairie Astronomy Club, and is free to club members. Yearly subscription without club membership is \$4.00. Regular membership (includes one-year subscription to Sky & Telescope, club newsletter, and four quarterly issues of the Astronomical League's newsletter), is \$12.00. Family membership is \$14.00. Newsletter Editor, Lee Thomas (402-3655). Address all correspondence to P.O. Box 30553, Lincoln.

PRESIDENT'S REPORT (Continued from Page 2)

should be available by the February meeting. This handbook is by far the best guide to deep sky observing available. Once you complete the list of "M" objects listed by following the well-written instructions, you will have become an expert in the night sky. A three- to six-inch telescope is all that is need, or you can use the club's 12-inch telescope out at Earl Moser's. Completion of the program will also qualify you for an award from the Astronomical League.

Several new members have asked about star atlases. There are several good ones available. Many start with the Norton's Star Atlas. This atlas charts stars down to about 5th magnitude and most of the brighter deep sky objects as well as a few dimmer ones. Popular double and variable stars are also explained. Its biggest fault is that it doesn't show the fainter stars that you will see in the dark skies outside of Lincoln. Also many objects are identified only by their Herschel Number rather than the more common M numbers or NGC numbers. The Observer's Guide does provide these old Herschel numbers as well as the more modern designations for the "M" objects in its observing program.

The atlas most of the active deep sky amateurs use is the Atlas Coeli 1950, Field Edition. There are several editions of this atlas, but the best is probably the Field Edition. Other versions are larger and more difficult to use at the telescope. This atlas shows all stars down to magnitude 7.75, galaxies to magnitude 13. Most other objects plotted go to magnitude limits equal to or beyond that of a 12-inch telescope, so you can hardly outgrow this atlas. It costs about the same as the Norton's Atlas. For the serious observer there is also the Atlas Coeli II, Catalogue 1950, which is a 370-page book describing in table format all deep sky objects plotted in the Atlas, and describing in detail all stars down to magnitude 6.25.

All of these publications can be purchased through Sky Publishing Corporation, which publishes Sky & Telescope Magazine. You can find ads for them in each issue of that magazine.

-- Rick Johnson

A NOTE TO OBSERVATORY PUBLIC NIGHT TELESCOPE OPERATORS...

Even on cold cruel winter nights the response of the telescope operators has been tremendous and greatly appreciated. In our zeal to really impress the public with the observ-

atory's abilities and the beauty of the heavens, we are tending to lose sight of the desire to keep the visitors interested over a long period

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PRAIRIE ASTRONOMY CLUB MEMBERSHIP ROSTER, January 23, 1978

Name	Address	City-Zone-State	Class	Expires
1. Eugene Alt	3831 So. 57th St.	Lincoln, NE 68506	R	9/78
2. Donn Baker	2616 No. 59th St.	Lincoln, NE 68507	R	8/78
3. Walter Baumann	2305 Marlynn Ave.	Lincoln, NE 68502	R	4/78
4. Tom Beardsley	5400 N Street	Lincoln, NE 68510	R	8/78
5. Michael Benes	722 Hill Street	Lincoln, NE 68502	R	12/78
6. Bill Besch	7420 Garland St.	Lincoln, NE 68505	R	8/78
7. Roger Besch	1030 No. 78th St.	Lincoln, NE 68505	R	7/78
8. Brad Binder	415 Lyncrest Dr.	Lincoln, NE 68510	R	2/79
9. James N. Campbell	1101 Cambridge Ct.#38--	Lincoln, NE 68505	R	11/78
10. Felix Cavosie	911 Division St.	Hurley, W. 68311	R	2/79
11. S. Chivukula	7801 South St.	Lincoln, NE 68506	R	2/79
12. John Clothier	355 So. Cotner Blvd.	Lincoln, NE 68510	R	9/78
13. Brian Cooper	5930 LaSalle Dr.	Lincoln, NE 68516	R	2/78
14. David Daiker	P.O. Box 629	Maverly, NE 68462	R	10/78
15. Allan Daubendick	1821 Jackson St.	Beatrice, NE 68310	R	3/78
16. Budd Duval	1015 So. 40th St.	Lincoln, NE 68510	F	12/78
17. Ed. C. Epp	1748 Euclid St.	Lincoln, NE 68502	R	2/79
18. Harlan Franey	1734 So. Cotner Blvd.--	Lincoln, NE 68506	R	1/79
19. Norman D. Frerichs	1423 Lincoln St.	Beatrice, NE 68310	R	8/78
20. Dale Greger	6917 Y St.	Lincoln, NE 68505	R	1/79
21. Joe Hamersky	3748 So. 40th St.	Lincoln, NE 68506	R	2/78
22. Dick Hartley	320 Wedgewood Dr.	Lincoln, NE 68510	R	10/73
23. Duane Hutchinson	3445 Touzalin Ave.	Lincoln, NE 68507	F	11/78
24. Clifford Johnson	P.O. Box 133	Trenton, NE 69044	R	8/78
25. Richard Johnson	1360 Pawnee St.	Lincoln, NE 68502	R	9/78
26. Werner Klammer	1648 No. Columbia St.--	Seward, NE 68434	R	9/78
27. David Knisely	1616 No. 14th St.	Beatrice, NE 68310	R	12/78
28. Ken Kopta	1544 Crestline Dr.	Lincoln, NE 68506	R	3/78
29. John Kubicek	6927 Lexington Ave.	Lincoln, NE 68505	R	2/78
30. John Lammers	1007 8th St.	Fairbury, NE 68352	R	12/78
31. Allan Lamm	1325 No. 16th St.	Lincoln, NE 68508	R	2/78

32. Richard McClain	3235 W. Pershing Rd.	Lincoln, NE 68502	F	12/78
33. Robert Manthey	Gateway Shopping Cntr--	Lincoln, NE 68505	R	9/78
34. Karl Miller	1149 So. 17th St.	Lincoln, NE 68502	R	5/78
35. Carroll L. Moore	1140 No. 79th St.	Lincoln, NE 68505	R	9/78
36. Earl Moser	-----	Hickman, NE 68372	R	9/78
37. Bill Noel	1646 David Dr.	Lincoln, NE 68504	R	2/79
38. William F. Norris	2832 Manse Ave.	Lincoln, NE 68502	R	1/79
39. Tom Peterson	6161 So. 70th St.	Lincoln, NE 68516	R	12/78
40. Mark Powell	3310 Cooper St.	Lincoln, NE 68506	R	1/79
41. Carroll Reinert	3895 Sheridan Blvd.	Lincoln, NE 68506	F	1/79
42. Curtis Roelle	6831 Bethany Park Dr.	Lincoln, NE 68505	R	3/78
43. Joe & Jennie St. Lucas	4327 Judson St.	Lincoln, NE 68504	F	6/78
44. Merton E. Sprengel	4522 Hillside St.	Lincoln, NE 68506	F	9/78
45. Larry Stepp	4200 So. 32nd St.	Lincoln, NE 68502	R	1/79
46. L. Lee Thomas	1025 No. 63rd, B107	Lincoln, NE 68505	R	9/78
47. Scott Titterington	1500 So. 77th St.	Lincoln, NE 68506	R	12/78
48. Steve & Adelita Traudt	2726 Washington St.	Lincoln, NE 68502	F	2/79
49. Scott Underwood	1525 So. 25th St.	Lincoln, NE 68502	R	1/79
50. Ronald B. Veys	5400 Salt Valley View, #10--	Lincoln, NE 68512--R	1/79	
51. Ed Woerner	4328 Meredith St., #306--	Lincoln, NE 68506	R	2/79

The above list includes only club members. Persons subscribing to the club newsletter without membership are not included. There are two classes of membership: "R" is a regular member (dues are now \$12.00), "F" is a family member, carrying two votes (dues are now \$14.00). Expiration date is month and year present term of membership is up for renewal. Prairie Astronomy Club membership rosters are published twice yearly, in the January and July issues of The Prairie Astronomer. The lists as shown are submitted to the Astronomical League for use on their official mailing list.

## OBSERVING CHAIRMAN'S REPORT

Mars continues to share the domination of the January sky with Jupiter, but soon it will be past its prime. Surface markings on the Red Planet will be difficult to see for several reasons. First, this year's opposition is rather unfavorable, with the angular size of the planet being at most just over 14 seconds of arc. Second, the northern hemisphere, which is deficient in dark markings, is tilted towards us, and third, there is a minor dust storm going on that should obscure things a bit.\*

Speaking of bright objects, you should spend some time looking at Orion, with its collection of bright stars and nebulae including the great Orion Nebula M42. Rigel (Alpha Orionis) is an interesting lesson in magnitudes. As we see it from earth, it is of magnitude +0.1, and is a close binary, its companion being of the seventh magnitude. The separation is about 9.5 seconds of arc and can be observed in some smaller instruments. However, the intrinsic or absolute visual magnitude is -6.8, which means that the seventh magnitude companion is really about as intrinsically bright as Vega, and if we brought Rigel up to where Alpha Centauri is, it would appear in our sky as bright as does the moon a couple of days from full phase! Would'n't that spoil things a bit! But, back to fainter things for a moment, why not try to observe the ever popular (or unpopular, as the case may be)

Horsehead Nebula. It extends south from near Zeta Orionis, and is quite faint, requiring a very large telescope and low power, although I have heard reports of its being seen in a six-inch telescope under superb conditions. It has a brighter companion, NGC I 435, which lies about one degree southeast of Zeta, and appears as a large fuzzy star in a six-inch telescope. Another nebula, NGC 2024, lies just east of Zeta and should be viewed with the star out of the field of view and under low power. Through an eight-inch reflector, this nebula looks somewhat like a tree. Moving eastward, in Monoceros use binoculars or rich field telescopes to find NGC 2237-8-9, a cluster with an associated faint nebula, NGC 2244, known as the Rosette Nebula. This grouping is located about two degrees east of the star Epsilon Monocerotis.

In Canis Major, look at the colorful cluster M41, located four degrees south and  $\frac{1}{2}$  degree east of Sirius. It is large and contains stars of varying color making it a good object for the smaller telescope. Moving eastward near the stars 2 and 4 Canis Majoris lie a scattering of beautiful open clusters M46, M47, and NGC 2423. Of particular note is M46 which has a small planetary nebula in the north half of the cluster.

--David Knisely

*\*Editor's note: Observations made after this report was written indicated that the Martian dust storm had abated.*

## NOTE TO PUBLIC NIGHT TELESCOPE OPERATORS (CONTINUED FROM P.3)

of time and hopefully encourage many to further their interest by joining the club. In order to best achieve these goals, we must present an organized and professional appearance. It is in this area that we have been lacking. A few guide lines, if followed, will help to assure continued public interest in the observatory.

1. KEEP ALL UNUSED EYEPIECES AND OTHER EQUIPMENT IN THE DESK DRAWER.

Once the locks are installed on the drawers they should be locked at all times even when the observatory is in use. This will serve two purposes: (1) It will help prevent theft, and (2) It will encourage the telescope operator to stick with the program subject and not be swinging the scope all over the sky to show one or two individuals the main objects in the sky, and then leave someone else to fend for themselves when it's their turn at the scope.

II. ADHERE TO THE SCHEDULED OBJECTS FOR THE MONTH.

Remember that most objects are in the sky for a six month period, but if we are going to have variety in our observation program these objects must be deleted for some of those six months. Whenever possible an object is selected for viewing when it is in the darkest and steadiest parts of the sky possible. Showing someone a planet that has just risen is not doing them a service as they watch a fuzzy image squirm around and listen to us make excuses for the lousy see-

ing.

III. WHEN ATMOSPHERIC CONDITIONS OR THE MOON REQUIRE A CHANGE IN THE SCHEDULED OBJECTS OBTAIN THE SUPERVISOR'S APPROVAL OF ANY SUBSTITUTE OBJECT.

Clouds, seeing conditions and a bright moon may require a change in the planned viewing. The moon will be known from the beginning to be a problem some nights and in that case usually the moon itself should be substituted for the faint objects it is washing out. Clouds may require a switch to objects in another part of the sky. Poor seeing might require low power objects be selected rather than high power ones. Remember you may advise the supervisor, but he is in charge and his decision is final.

IV. EXPLAIN TO EACH VIEWER WHAT HE IS LOOKING AT.

Keep your explanation short and simple. Only when there are few viewers on hand and when it appears the viewer is capable of understanding, should a long and detailed explanation be given. This means you will be saying the same things over and over again and probably be bored to tears, remember the viewer has not heard the story before so keep telling your spiel over and over again.

-- Rick Johnson

# JANUARY MEETING NOTICE

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Everyone else has first-come, first-served crack at the remaining supply. Prices are \$4.00 for the HANDBOOK and \$5.95 for the CALENDARS. It helps if you bring the right change, by the way! See you at the meeting!

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