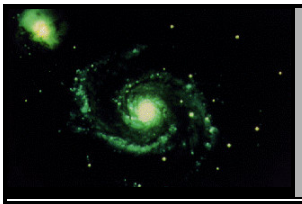


The Prairie Astronomer

The Official Newsletter Of The Prairie Astronomy Club, Inc.

January 2005 **Volume 46 Issue #1**

Internet Addresses

PAC Web Page:	www.prairieastronomyclub.org
PAC E-Mail:	info@prairieastronomyclub.org
NSP Web Page:	www.nebraskastarparty.org
NSP E-Mail:	nsp@4w.com
OAS Web Page:	www.OmahaAstro.com
Hyde Observatory	www.hydeobservatory.info
NEB-STAR	www.neb-star.org

CLUB EVENTS

PAC Meeting 7:30pm
Tuesday, January 25, 2005
Program: How To Use Your Telescope

Club Star Party
Friday, February 11, 2005

PAC Meeting 7:30pm
Tuesday, February 22, 2005
Program: to be announced

Club Star Party
Friday, March 11, 2005

PROGRAM

January program:

How To Use Your Telescope

PAC-LIST: You may subscribe to the PAC listserv by sending an e-mail message to: **imailsrv@prairieastronomyclub.org**. In the body of the message, write "Subscribe PAC-List your-email-address@your-domain.com"

For example:
Subscribe pac-list stargazer@myISP.com

To post messages to the list, send to the address **pac-list@prairieastronomyclub.org**

READ THIS NEWSLETTER ONLINE

Those who wish to help with publishing and postage costs by receiving only the on-line version of the newsletter should contact Mark Dahmke. Mark will give you the logon account and password for access. You may receive both the mailed version and the on-line version if you wish. A printable PDF version of this newsletter is also available through the website.

CONTENTS:

The Prairie Astronomer is published monthly by the Prairie Astronomy Club, Inc. Membership expiration date is listed on the mailing label. Membership dues are: **Regular $30/yr, Family $35/yr**. Address all new memberships and renewals to: **The Prairie Astronomy Club, Inc., PO Box 5585, Lincoln, NE 68505-0585**. For other club information, please contact one of the club officers listed on the last page of this newsletter. Newsletter comments and articles should be submitted to: **Mark Dahmke, PO Box 80266, Lincoln, NE 68501 or mdahmke@4w.com,** no less than ten days prior to the club meeting. The Prairie Astronomy Club meets the last Tuesday of each month at Hyde Memorial Observatory in Lincoln, NE.

Secretary's Report

President Ron Veys called the meeting to order. There was one new visitor.

Ron discussed upcoming events:

- The next club star party will be January 7th at Olive Creek.
- The next club meeting will be January 25th. The topic will be "How To Use Your Telescope".

Ron presented some additional PowerPoint slides on PAC and NSP. This material is used to introduce visitors and new members to our club activities. He also mentioned that he would like to call a meeting of the club officers before the next monthly club meeting.

The Astronomical League has several awards for observing accomplishments, including the well-known Messier award. If you're interested in starting a project, or have completed one, contact Club Observing Chair, Jeff King.

Treasurer's Report: At this meeting the club's financial records were transferred from Liz Bergstrom to the new treasurer, Lee Thomas. Lee will have a report for the next meeting.

Hyde news: Hyde Observatory will be closed January 1 and will reopen January 8, 2005. If you'd like to help at Hyde, contact volunteer coordinator, Dave Churilla. Volunteers are needed. It is an enjoyable activity and training is provided, so you don't need to be knowledgeable in astronomy to volunteer.

Ron Veys presented "What's up in the sky for January" using slides provided by Mark Dahmke.

Erik Hubl reported that the Lincoln Planning Commission is considering a new ordinance for outdoor nighttime lighting. This ordinance focuses on light pollution and light trespass issues. The proposed ordinance will be discussed at the January 5th Planning Commission meeting. Eric encouraged everyone to get involved by contacting Planning Commissioners and City Council members to convey the importance of this issue, and to pass along our ideas for curbing light pollution. Erik gave a copy of the ordinance to Mark Dahmke, who later distributed it to the PAC email list.

There was no other new business and the meeting was adjourned to the program. December's program: "Launching a 30 Meter Telescope Project" by Larry Stepp.

Submitted by,

Bob Leavitt

Hyde Observatory Volunteer Schedule

Date	Team Leader	Operators		Supervisor	Events
January					
1/29/05	Bill Wells	Erica Block	Dave Brokofsky	Erik Hubl	
February					
2/5/05	Jeff King	AJ Benker	Steve Lloyd	Jack Dunn	
2/12/05	Brian Sivill	Bob Kacvinsky	Erica Block	Dave Hamilton	
2/19/05	Bob Leavitt	Joey Churilla	Jim Kvasnicka	Dave Churilla	
2/26/05	Dan Delzell	Dave Brokofsky	Josh Machacek	Rick Johnson	
March					
3/5/05	Bill Wells	Cece Hedrick	Bob Kacvinsky		
3/12/05	Jeff King	Erica Block	Joey Churilla	Dave Churilla	
3/19/05	Dan Delzell	Jared Delzell	AJ Benker		
3/26/05	Bob Leavitt	Jim Kvasnicka	Dave Brokofsky		
Summer Hours: April through September (Sundown to 11:00 PM)					
Winter Hours: October through March (7:00 PM to 10:00 PM)					

Comet Machholz– Dave Knisely

January 7th, 2005: Well, it was a little too snowy (and COLD at +6F) to attempt to go to Olive Creek, so I observed Comet Machholz from my driveway here in Beatrice. Once dark adapted, the comet was easy to see not far southwest of the Pleiades. My best estimate on its brightness is about magnitude 3.8 or so despite the sky brightness (ZLM was about 5.3). The comet was non-stellar, but not very large, and showed no clear signs of a tail with the unaided eye. In my 10x60 Celestron binoculars, the comet was very nicely shown as a moderate-sized nearly circular fuzzy ball of light brighter towards the middle with a little asymmetry in the brightness profile (Degree of Condensation: 3). By moving the binoculars around a bit, I could just barely detect two *very* faint tails. The ion or plasma tail was narrow extending to the east for between 3 and 4 degrees, while the dust tail was a bit broader and diffuse, extending to the south-southeast for perhaps a degree in length at most from the center of the coma. Interestingly enough, the dust tail was a bit brighter in its central portion than was the ion tail. Recent long-exposure images, which have been extensively processed, have shown the ion tail to be approaching 10 degrees in length, although most of this length is far too faint to be seen visually. In any case, the tails were far from obvious and probably would not have been easily noticed by the casual urban observer.

In my 100mm f/6 refractor at 20x (4.1 degree field of view), the comet and the Pleiades could be barely gotten in the same field. The coma appeared faintly bluish and was perhaps 20 arc minutes in width. The two tails were still marginal but slightly easier to see, with the dust tail now a bit more noticeable. I could begin to see the star-like nuclear condensation buried in the brighter central glow of the coma. The skyglow was a bit of a problem, so I put in my 24mm Panoptic eyepiece and the Lumicon Deep-sky filter (25x, 2.4 degree field with the filter). This improved the visibility of the tails a bit. I could trace the ion tail to around 3 degrees at 25x but not a great deal more with any certainty. The dust tail was confirmed at about a degree, and had a noticeable almost linear broad bar or spike-like brightening near its middle where the coma and tail joined. The coma also looked to be very slightly brighter on the sunward-side of the nuclear condensation than on the tailward side. At 40x (no filter), the bluish color of the coma was fairly easy to see, although I have seen comets, which showed the color more intensely. I kicked things up to about 100x, and the nuclear condensation was obviously stellar, standing out well from the glow of the inner coma. The coma appeared to be slightly irregular in brightness, but I saw no hoods or jets. It looks like the comet's brightness is hanging in there, so we may have an object for viewing for a month or so at least.

NASA Salutes Successful Huygens Probe

NASA Administrator Sean O'Keefe today offered congratulations to the European Space Agency (ESA) on the successful touchdown of its Huygens probe on Saturn's moon Titan.

"The descent through Titan's atmosphere and down to its surface appeared to be perfect," Administrator O'Keefe said. "We congratulate ESA for their spectacular success. We're very proud of the Cassini-Huygens teams that helped to make this both an engineering and scientific victory, and we appreciate the dedication and support from our international partners."

The probe entered Titan's upper atmosphere at about 5:15 a.m. EST Jan. 14. During its two and one-half hour descent to the surface of the moon, it sampled the chemical composition of the atmosphere. The probe continued transmitting data for more than 90 minutes after reaching the surface.

The data was sent to NASA's Cassini spacecraft, and was recorded and relayed through NASA's Deep Space Network to the Jet Propulsion Laboratory, Pasadena, Calif., and to ESA's Space Operations Center in Darmstadt, Germany. The European Space Agency facility is the operations center for the Huygens probe mission. Data was received over one of two channels designed to be mostly redundant.

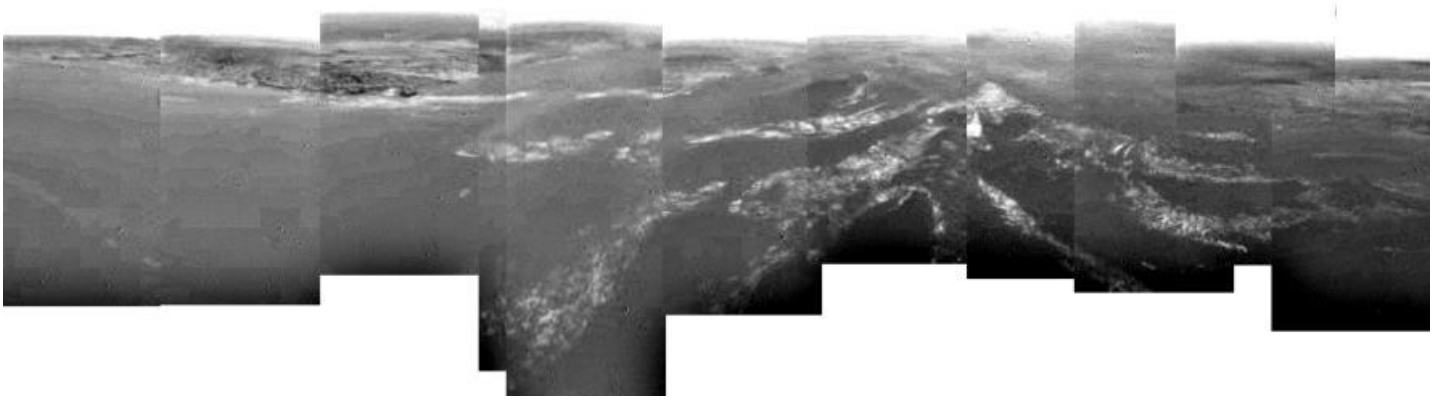
JPL Director Dr. Charles Elachi said, "We congratulate our colleagues at ESA on the splendid performance of the Huygens probe and look forward to the science results of this effort. This has been a great example of international collaboration to explore our solar system."

Cassini-Huygens is a joint mission of NASA, ESA and the Italian Space Agency. ESA's Huygens probe was carried to Saturn's orbit aboard Cassini, and sent on its way to Titan on Dec. 24, 2004. Cassini continues to orbit Saturn on a four-year prime mission to study the planet, its rings, moons and magnetosphere.

"Our ESA colleagues have every reason to be very proud of the excellent manner in which the Huygens probe performed," said Robert T. Mitchell, Cassini program manager at JPL. "We are also proud of our support for this endeavor," he said.

JPL, a division of the California Institute of Technology in Pasadena, manages the Cassini mission for NASA's Science Mission Directorate, Washington. JPL designed, developed and assembled the Cassini orbiter. ESA built and managed the development of the Huygens probe and is in charge of the probe operations. ISA provided the high-gain antenna, much of the radio system and elements of several of Cassini's science instruments.

More information about the Cassini-Huygens mission is available on the Web, at: http://www.nasa.gov/cassini and http://saturn.jpl.nasa.gov.



Original Caption Released with Image:

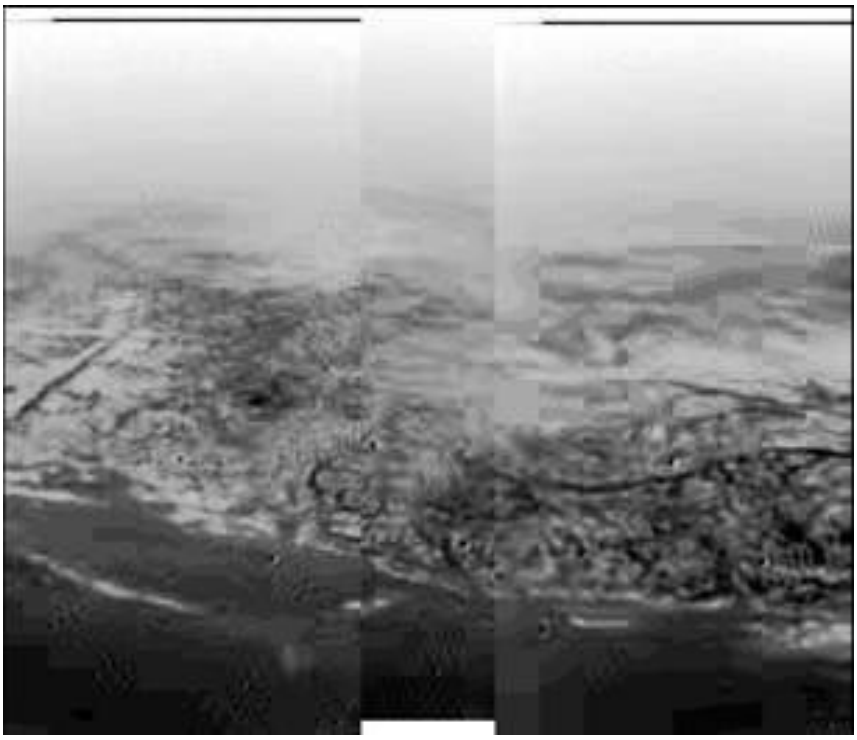
This composite was produced from images returned on January 14, 2005, by the European Space Agency's Huygens probe during its successful descent to land on Titan. It shows a full 360-degree view around Huygens. The left-hand side, behind Huygens, shows a boundary between light and dark areas. The white streaks seen near this boundary could be ground 'fog,' as they were not immediately visible from higher altitudes.

As the probe descended, it drifted over a plateau (center of image) and was heading towards its landing site in a dark area (right). From the drift of the probe, the wind speed has been estimated at around 6-7 kilometers (about 4 miles) per hour.

These images were taken from an altitude of about 8 kilometers (about 5 miles) with a resolution of about 20 meters (about 65 feet) per pixel. The images were taken by the Descent Imager/Spectral Radiometer, one of two NASA instruments on the probe.

The Cassini-Huygens mission is a cooperative project of NASA, the European Space Agency and the Italian Space Agency. The Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, manages the Cassini-Huygens mission for NASA's Science Mission Directorate, Washington, D.C. The Cassini orbiter and its two onboard cameras were designed, developed and assembled at JPL. The Descent Imager/Spectral team is based at the University of Arizona, Tucson, Ariz. For more information about the Cassini-Huygens mission visit http://saturn.jpl.nasa.gov/home/index.cfm .

Image Credit:
ESA/NASA/Univ. of Arizona



This composite was produced from images returned on January 14, 2005, by the European Space Agency's Huygens probe during its successful descent to land on Titan. It shows the boundary between the lighter-colored uplifted terrain, marked with what appear to be drainage channels, and darker lower areas.

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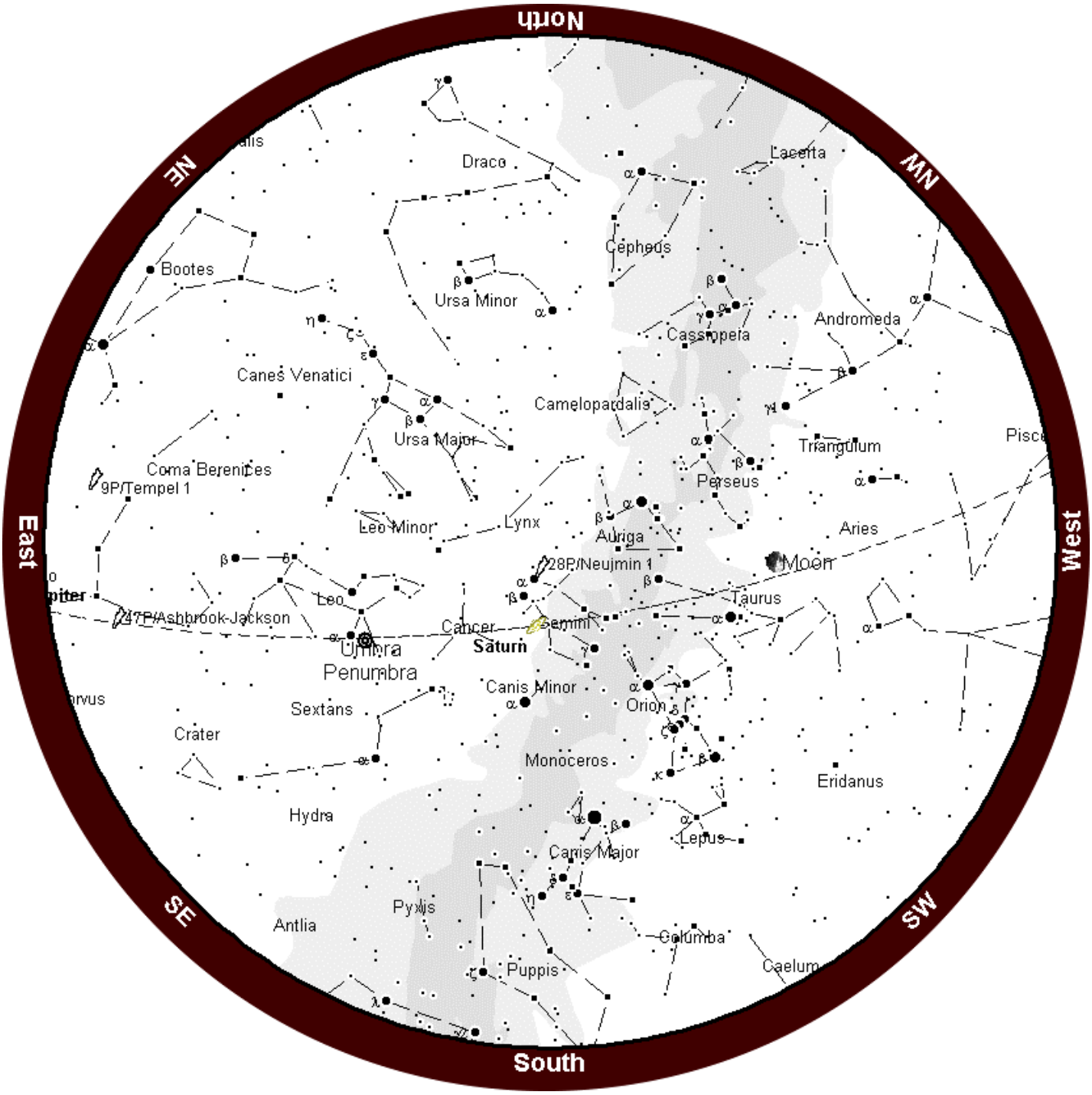
Image credit: ESA/NASA/Univ. of Arizona

February Star Chart



Events Calendar

February 2005

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 Sun: 07:36 - 17:44	2 Sun: 07:35 - 17:45	3 Sun: 07:34 - 17:46	4 Sun: 07:33 - 17:48 ISS Crosses disk of Sun	5 Sun: 07:32 - 17:49 Hyde Observatory open to the public
6 Sun: 07:31 - 17:50	7 Sun: 07:30 - 17:51	8 Sun: 07:28 - 17:53 Beta Centaurids	9 Sun: 07:27 - 17:54	10 Sun: 07:26 - 17:55	11 Sun: 07:25 - 17:56 Club Star Party	12 Sun: 07:24 - 17:57 Beta Leonids; Hyde Observatory open to the public
13 Sun: 07:22 - 17:59	14 Sun: 07:21 - 17:59	15 Sun: 07:20 - 18:00	16 Sun: 07:18 - 18:01	17 Sun: 07:17 - 18:02	18 Sun: 07:16 - 18:04	19 Sun: 07:14 - 18:05 Hyde Observatory open to the public
20 Sun: 07:13 - 18:06 Mercury close to Uranus	21 Sun: 07:12 - 18:07	22 Sun: 07:10 - 18:08 PAC Meeting 7:30pm	23 Sun: 07:09 - 18:09	24 Sun: 07:07 - 18:11	25 Sun: 07:06 - 18:12	26 Sun: 07:04 - 18:13 Hyde Observatory open to the public
27 Sun: 07:03 - 18:14	28 Sun: 07:01 - 18:15					

Moon phase images by: António Cidadão

Directions to Olive Creek Observing Site

Shorter:

Take Hwy 77 South out of Lincoln until you get to the Crete corner (junction Hwy 77 and Hwy 33). Go West on Hwy 33 (toward Crete) until you get to SW 72 St. Turn Left (South) on SW 72 St. and go about 5 miles until you get to SW Panama Rd. Turn right (West) until you get to SW 100 St. (SW 100 St does NOT go through to Hwy 33). Turn Left (South) on SW 100 St and go about 1 to 1 1/2 miles until you see the sign and entrance to Olive Creek (this is the West side of the Park). It's on your left (East) side of the road.
More Black Top:

Take Hwy 77 South out of Lincoln until you get to the Crete corner (junction Hwy 77 and Hwy 33). Go West on Hwy 33 (toward Crete) until you get to about SW 114 St. - the first intersection after SW 100 St. (forgot to look at this street sign, sorry - you'll see a sign for Olive Creek though at this road- but don't count on anymore signs after that, I didn't see any). Turn Left (South) on SW 114 St and go about 5 miles or so until you get to SW Panama Rd (you'll see a church and small school on your right). Turn Left (East) and go about a mile to SW 100 St, then turn Right (South) and go 1 to 1 1/2 miles until you see the Olive Creek entrance and sign (on your left hand side of the road).

OFFICERS
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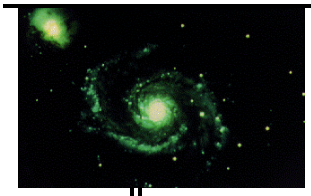

The Prairie Astronomer
c/o The Prairie Astronomy Club, Inc.
P.O. Box 5585
Lincoln, NE 68505-0585

First Class Mail

Next PAC Meeting
January 25, 2005
7:30 PM
Hyde Observatory

«Title» «FIRSTNAME» «MIDDLENAME» «LASTNAME» «RENEWALDATE»
«CAREOF»
«ADDRESS1»
«ADDRESS2»
«City», «State»
«Zip»