

THE PRAIRIE ASTRONOMER

The Official Newsletter Of The Prairie Astronomy Club, Inc.

March 2005

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 NEB-STAR www.neb-star.org

PROGRAM

THE PAC Club Library – Lee Taylor

"Materials in the club library are available for checkout to all members. These include videotapes, books, and various periodicals acquired over the years. Lee Taylor has been going through them recently, updating the list of contents of the library. He will be taking out some of these materials and reviewing and exhibiting them to remind members of this under-appreciated club asset.

CLUB EVENTS

PAC Meeting 7:30pm
 Tuesday, March 29, 2005
Program: PAC Club Library

Club Star Party
 Friday, April 08, 2005

Astronomy Day
 Sunday, April 17, 2005

PAC Meeting 7:30pm
 Tuesday, April 26, 2005
**Program: Viewing in the Daytime -
 A Nearest-Star Party**

Club Star Party
 Friday, May 06, 2005

Mahoney Star Party
 Sunday, May 13, 2005

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.

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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 were two visitors. Ron discussed upcoming club events:

- The next club star party will be March 11th at Olive Creek.
- The next club meeting will be March 29th. The topic will be "The PAC Library" by Lee Taylor.
- The dates for the Mahoney Star Parties in 2005 are May 13, June 10, July 8, August 12, and September 9.

NSP news: Planning for the Nebraska Star Party is ongoing. The dates for this year's NSP are July 31st - August 5th. The chairman is Eric Balcom, a member of OAS. NSP takes place at Merritt Reservoir in the Nebraska Sandhills, about 27 miles southwest of Valentine. It's a family oriented event and features some of the darkest skies in the nation. Erik Hubl commented that NSP is mentioned in the current issue of Midwest Living magazine.

Hyde news: Hyde Observatory is open every Saturday night from 7:00 to 10:00 pm. Starting April 1st the observatory switches to summer hours, sundown to 11:00 pm. If you'd like to help at Hyde, contact volunteer coordinator, Dave Churilla. The annual Volunteer Appreciation Dinner is scheduled for April 5, 6:30 pm, at Mueller Planetarium. The Hyde board will present the Volunteer of the Year Award at this dinner. If you plan to attend, Jack Dunn can provide you with a parking permit, but you need to contact him in advance.

Treasurer's report: Lee Thomas reported that a 24-month CD with issue value of \$3,029.32 was renewed on 2/28/05 at \$3,556.55. He also allowed another 24-month CD with an issue value of \$14,207.43 to renew on 2/7/05. The renewal balance was \$16,082.81. The two CD's earned a total of \$2,402.61 in interest. (Note this includes follow-up information provided after the meeting).

Website and newsletter report: Mark Dahmke has been revamping the member database. When completed it will be easier to manage and members will be able to update their own account profiles. We are still mailing about 16 newsletters each month. PAC could save on postage if additional members would switch to receiving their newsletters online.

Astronomy class: Bob Leavitt gave an update on the beginning astronomy class, which will be offered by PAC through Lincoln Parks and Recreation. The three-session class will be offered on June 8, 15, and 22 from 8:00 - 10:30 pm at Hyde. The class is oriented toward novices and covers basic astronomy and how to use telescopes, sky charts, and binoculars. Anyone interested in helping with the class should contact Bob.

Several club members attended the opening day of the Mars Quest exhibit at SAC Museum on February 5th, and listened to the talk given by David Levy. The exhibit runs through May 1 and is well worth your time to attend. Speakers are scheduled every other week. For more information see www.strategicairandspace.com

Ron reviewed a summary of observing highlights for what's up in the sky in March.

Jack Dunn gave an update on Astronomy Day, which will be April 17th. He displayed a promotional Powerpoint slide that can be used at Hyde. Astronomy Magazine and Meade, Inc. are providing promotional material and a Meade ETX90 computerized telescope, which will be given away in a drawing that day. Nationally, they are giving away one grand prize - a Meade LX200. An area will be set up to display telescopes, and PAC members are encouraged to bring their scopes. If you would like to present something at Astronomy Day you should send an email to Jack Dunn with your proposal (jdunn@spacelaser.com). Jack will bring a sign-up sheet to the next meeting. This year there will not be a speaker. Instead, Teresa Sindelar from the Cosmosphere will be here. Teresa is going to do part of the Cosmosphere's "Dr. Goddard's Lab" show as well as some other activities. Plans aren't totally set yet, but she will bring plenty of Cosmosphere materials.

The meeting was adjourned to the program. Rick Johnson presented February's program: "The History of PAC". Mark Dahmke taped the program. He is working on a DVD version of it that will include Rick's and Earl's photos and video.

Submitted by,
Bob Leavitt

Hyde Observatory Volunteer Schedule

Date	Team Leader	Operators		Supervisor	Events
March					
3/26/05	Bob Leavitt	Jim Kvasnicka	Dave Brokofsky	Rick Johnson	
April					
4/2/05	Dan Delzell	Jared Delzell	Steve Lloyd		
4/9/05	Bill Wells	Erica Block	Josh Machecek		
4/16/05	Dave Churilla	Joey/Bob L	Josh (display)/	Scopes on lawn	Astronomy Day
4/16/05	Dave Hamilton	Cece Hedrick	AJ Benker	Dave Knisely	Astronomy Day Kickoff
4/23/05	Bob Leavitt	Jim Kvasnicka	Dave Brokofsky		
4/30/05	Jeff King	Bob Kacvinsky	Joey Churilla	Dave Churilla	
May					
5/7/05	Dan Delzell	Jared Delzell	Josh Machacek		
5/14/05	Bob Leavitt	Joey Churilla	Cece Hedrick	Dave Churilla	
5/21/05	Bill Wells	AJ Benker	Steve Lloyd		
5/28/05	Jeff King	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)					

PAC Newsletter from August 29, 1967– Rick Johnson

Sorting through 59 years of stuff that has accumulated in this house since I moved in in 1946 I came across an early "Prairie Astronomer". The opening paragraph by Monte Cole caught my eye. Remember this is 10 years before Hyde.

"It looks like we have finally found a site for our observatory! From the way things look now, the telescope will be located in the south section of Holmes Park, directly across from the Cedars Home. The club has held two star parties in this area. The sky conditions were poor for the first and so was attendance. The second star party was a good one; the skies were clear and there were about 15 members out that night. Jess Williams, our secretary, has, though Thomas Pansing, contacted the City Park Commission. The Park Commission has promised to help as much as possible, in regard to providing land and helping with the building. Some of the club officers, along with Mr. Pansing, are going to meet with the Park Board on September 14 and discuss pending plans for the observatory -- IT LOOKS GOOD."

Obviously this didn't pan out but I find my memory totally blank on this one. I know we didn't really understand what it took to build such an observatory. I do remember going on a morning show at KOLN-TV to push it. Earl was there but I don't remember who the others were. Neither do I remember the star parties across from Cedars though we did do some for Cedars and maybe that is what Monte is referring to. It's interesting that the location is likely the site the Parks recently sold.

The attached photo was taped into the newsletter. Someone, not me, printed enough of those to go into the newsletter. I would guess that was Jess Williams that did the printing and donated the cost. Left to right is Scott Coatsworth, Steve Kunkee, Earl Moser and I have no idea who the other person is with the camera. Since we know Monte was there he likely took the picture.



Cassini Finds an Atmosphere on Saturn's Moon Enceladus

March 16, 2005

The Cassini spacecraft's two close flybys of Saturn's icy moon Enceladus have revealed that the moon has a significant atmosphere. Scientists, using Cassini's magnetometer instrument for their studies, say the source may be volcanism, geysers, or gases escaping from the surface or the interior.

When Cassini had its first encounter with Enceladus on Feb. 17 at an altitude of 1,167 kilometers (725 miles), the magnetometer instrument saw a striking signature in the magnetic field. On March 9, Cassini approached to within 500 kilometers (310 miles) of Enceladus' surface and obtained additional evidence.

The observations showed a bending of the magnetic field, with the magnetospheric plasma being slowed and deflected by the moon. In addition, magnetic field oscillations were observed. These are caused when electrically charged (or ionized) molecules interact with the magnetic field by spiraling around the field line. This interaction creates characteristic oscillations in the magnetic field at frequencies that can be used to identify the molecule. The observations from the Enceladus flybys are believed to be due to ionized water vapor.

"These new results from Cassini may be the first evidence of gases originating either from the surface or possibly from the interior of Enceladus," said Dr. Michele Dougherty, principal investigator for the Cassini

magnetometer and professor at Imperial College in London. In 1981, NASA's Voyager spacecraft flew by Enceladus at a distance of 90,000 kilometers (56,000 miles) without detecting an atmosphere. It's possible detection was beyond Voyager's capabilities, or something may have changed since that flyby.

This is the first time since Cassini arrived in orbit around Saturn last summer that an atmosphere has been detected around a moon of Saturn, other than its largest moon, Titan. Enceladus is a relatively small moon. The amount of gravity it exerts is not enough to hold an atmosphere very long. Therefore, at Enceladus, a strong continuous source is required to maintain the atmosphere.

The need for such a strong source leads scientists to consider eruptions, such as volcanoes and geysers. If such eruptions are present, Enceladus would join two other such active moons, Io at Jupiter and Triton at Neptune. "Enceladus could be Saturn's more benign counterpart to Jupiter's dramatic Io," said Dr. Fritz Neubauer, co-investigator for the Cassini magnetometer, and a professor at the University of Cologne in Germany.

Since the Voyager flyby, scientists have suspected that this moon is geologically active and is the source of Saturn's icy E ring. Enceladus is the most reflective object in the solar system, reflecting about 90 percent of the sunlight that hits it. If Enceladus does have ice volcanoes, the high reflectivity of the moon's surface might result from continuous deposition of icy particles originating from the volcanoes.

Enceladus' diameter is about 500 kilometers (310 miles), which would fit in the state of Arizona. Yet despite its small size, Enceladus exhibits one of the most interesting surfaces of all the icy satellites.

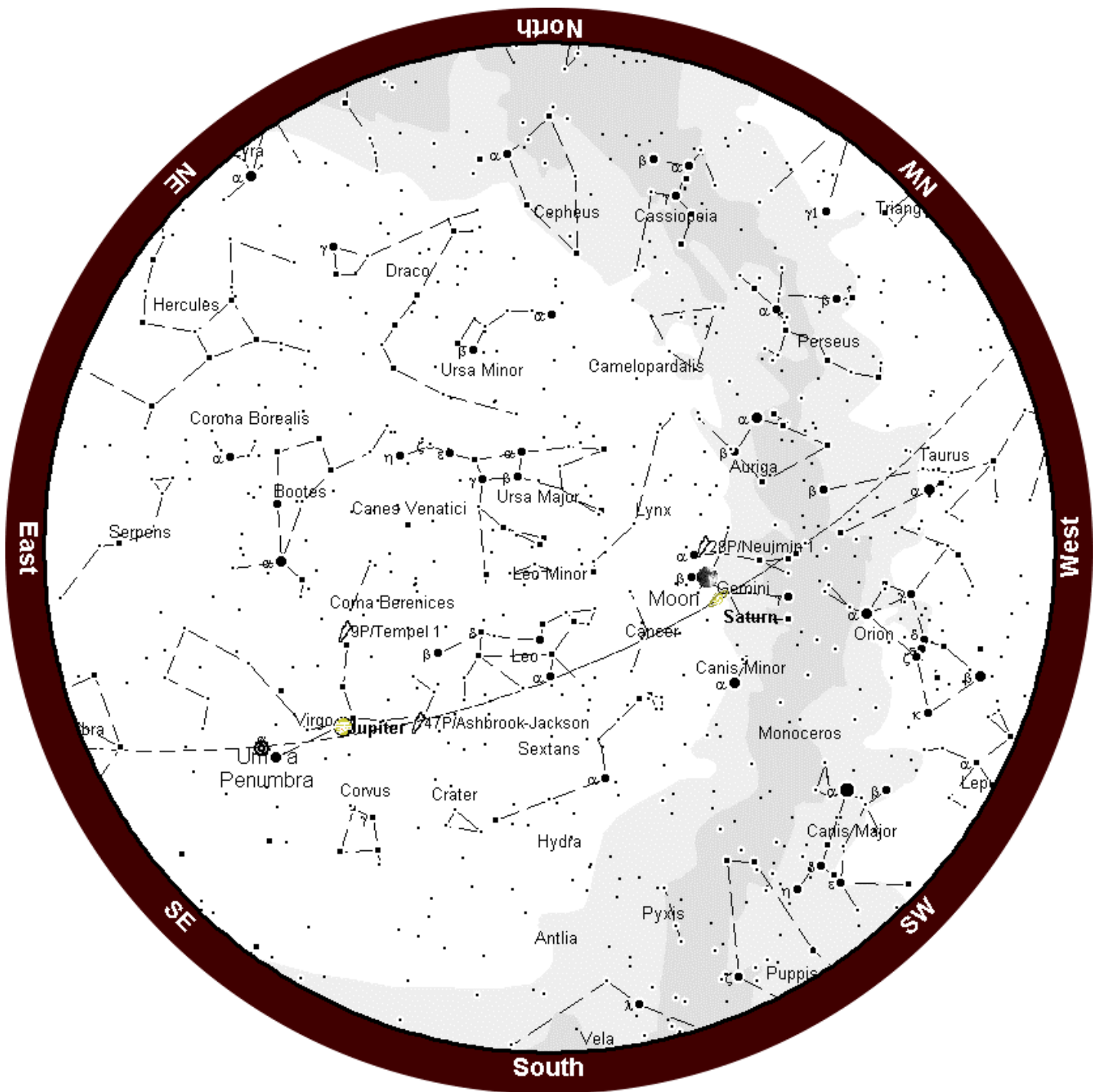
For images and information on the Cassini mission visit <http://saturn.jpl.nasa.gov> and <http://www.nasa.gov/cassini>.

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 was designed, developed and assembled at JPL.



This false-color, close-up look at Saturn's moon Enceladus yields new insight into the different processes that have shaped the moon's icy surface.

April Star Chart



Events Calendar

April 2005						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 	2 
					Sun: 18:10 - 06:51	Sun: 18:08 - 06:52
						Hyde Observatory open to the public
3 	4 	5 	6 	7 	8 	9 
Sun: 19:07 - 07:53	Sun: 19:05 - 07:54	Sun: 19:04 - 07:55	Sun: 19:02 - 07:56	Sun: 19:00 - 07:57	Sun: 18:57 - 07:58	Sun: 18:55 - 07:59
Jupiter Opposition					Club Star Party	Hyde Observatory open to the public
10 	11 	12 	13 	14 	15 	16 
Sun: 18:54 - 08:00	Sun: 18:52 - 08:01	Sun: 18:51 - 08:02	Sun: 18:49 - 08:03	Sun: 18:48 - 08:04	Sun: 18:46 - 08:05	Sun: 18:45 - 08:06
				Moon - Max. Libration		Hyde Observatory open to the public; Hyde Observatory open to the public
17 	18 	19 	20 	21 	22 	23 
Sun: 18:43 - 08:07	Sun: 18:42 - 08:08	Sun: 18:40 - 08:09	Sun: 18:39 - 08:11	Sun: 18:37 - 08:12	Sun: 18:36 - 08:13	Sun: 18:34 - 08:14
Astronomy Day						Hyde Observatory open to the public
24 	25 	26 	27 	28 	29 	30 
Sun: 18:33 - 08:15	Sun: 18:32 - 08:16	Sun: 18:30 - 08:17	Sun: 18:29 - 08:18	Sun: 18:28 - 08:19	Sun: 18:26 - 08:20	Sun: 18:25 - 08:21
		PAC Meeting 7:30pm; Mercury Elongation				May-Librids; Hyde Observatory open to the public

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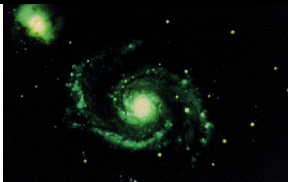
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The Prairie Astronomer
c/o The Prairie Astronomy Club, Inc.
P.O. Box 5585
Lincoln, NE 68505-0585

First Class Mail

**Next PAC Meeting
March 29, 2005
7:30 PM
Hyde Observatory**

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