

THE PRAIRIE ASTRONOMER

The Official Newsletter Of The Prairie Astronomy Club, Inc.

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PROGRAM

Observing the Sun in H-Alpha and White Light

Dave Knisely and Dave Churilla will talk about observing the Sun, with assistance from Joey Churilla. The presentation will be non-technical, although some aspects of H-Alpha filters will be discussed. They will talk about getting started viewing the sun both in H-Alpha and white light. Video of the sun taken by Joey and Dave Churilla will be shown at the end of the presentation.

If the weather permits, Joey and Dave Churilla will have two telescopes set up with H-Alpha filters for club members and the public's enjoyment prior to the club meeting, from 6pm until 7:15pm.

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.

CLUB EVENTS

HST 15th Birthday
 Monday, April 25, 2005
 Mueller Planetarium

PAC Meeting 7:30pm
 Tuesday, April 26, 2005
"Observing the Sun in H-Alpha and White Light"

Club Star Party
 Friday, May 06, 2005

Mahoney Star Party
 Friday, May 13, 2005

PAC Meeting 7:30pm
 Tuesday, May 31, 2005
Larry Hancock and Erik Hubl are going to give a program on their meteorite collections

Club Star Party
 Friday, June 03, 2005

Mahoney Star Party
 Friday, June 10, 2005

CONTENTS:

Secretary's Report 2
 Hyde Observatory Volunteer Schedule 3
 HYDE OBSERVATORY'S NEW TELESCOPE The Celestron
 NexStar 11GPS XLT Schmidt-Cassegrain - Dave Knisely 4
 Astronomy Day - April 17th 2005 5
 April Star Chart 6
 Events Calendar 7

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 visitor, who brought a telescope to get some help. Ron discussed upcoming club events:

- The next club star party will be April 8th at Olive Creek.
- The next club meeting will be April 26th. The topic will be "Viewing In Daytime – A Nearest Star Party" by Dave Churilla and Dave Knisely. A solar observing session will take place before the meeting from 6:00 – 7:15 p.m.
- Astronomy Day is April 17 (see Jack Dunn's report below).
- For the Hubble Space Telescope's 15th birthday, the Space Telescope Science Institute has prepared a pair of new, never-before-seen, giant high-resolution images. Jack Dunn said that these two prints, measuring 4 feet x 6 feet, will be unveiled at the Mueller Planetarium on April 25th.
- The dates for the Mahoney Star Parties in 2005 are May 13, June 10, July 8, August 12, and September 9.

Jack Dunn gave an update on Astronomy Day, which is April 17th from 1:30 – 4:30 p.m. The Meade ETX90 telescope has arrived. A drawing for the scope will be held at around 4:00 p.m. that day. Nationally, they are giving away one grand prize – a Meade LX200. Boxes of handout materials and tote bags have arrived from Astronomy Magazine and Meade. An area will be set up to display telescopes, and PAC members are encouraged to bring their scopes. Brian Sivill was appointed "Scope Wrangler" and will be coordinating setup of the scopes. The east doors of Morrill Hall will be unlocked at noon for people to bring in their scopes and displays. If you would like to present something at Astronomy Day send an email to Jack Dunn with your proposal (jdunn@spacelaser.com). The speaker this year is Teresa Sindelar from the Cosmosphere. Teresa is going to do part of the Cosmosphere's "Dr. Goddard's Lab" show. She will bring plenty of Cosmosphere materials, including a Russian space suit. There will be two robotics demos. Out front there will be solar observing with Dave and Joey Churilla. To kick off the festivities, a star party will be held at Hyde Observatory the night before, on Saturday April 16th. Club members will have telescopes on the front lawn for public viewing along with the observatory's 3 telescopes. Jack will be sending out news releases and fliers to schools and businesses.

Handicap Star Party: Omaha Astronomical Society has proposed holding a joint handicap star party with PAC. This would be held in conjunction with one of the regular Mahoney Star Parties - probably May 13th or June 10th. About 5 or 6 PAC members indicated they would be interested in participating. There was a slight preference for the June 10th date. One concern is lack of scopes that are at the proper height for people in wheel chairs. Del Motycha offered to let someone use his ETX90, which has a tabletop mount. Bob Leavitt will contact OAS to discuss the next steps.

Hyde news: Starting April 1st Hyde Observatory switches to its summer hours, which are 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.

NSP news: The dates for this year's NSP are July 31st – August 5th. NSP takes place at Merritt reservoir in the Nebraska Sandhills, about 27 miles southwest of Valentine. Dave Knisely reported that all the cabins at Merritt are all rented. Motel rooms should still be available in Valentine, as well as camping at Merritt.

Website and club equipment: Mark Dahmke is redesigning the member database and web interface. He is about one month away from having this ready to go. Mark also has responsibility for club scopes and other equipment. If anyone would like to check out a club scope contact Mark.

Treasurer's report: Lee Thomas reported that the main club account is in good shape. We have over \$500 in this account. The annual PAC audit was discussed. Lee Thomas, Mark Dahmke, Lee Taylor and Rick Littrell were appointed to conduct the audit. The results should be available at next month's meeting.

Astronomy class: Bob Leavitt gave an update on the beginning astronomy class, which will be offered by PAC through Lincoln Parks and Recreation. The class is oriented toward novices and covers basic astronomy and how to use telescopes, sky charts, and binoculars. The three-session class will be offered on June 8, 15, and 22 from 8:00 – 10:30 pm at Hyde. Class sessions are from 8:00 – 9:30 with observing sessions from 9:30 – 10:30. Volunteers are needed in three areas: putting together class materials, teaching classroom sessions, and setting up scopes for the observing sessions. Anyone interested in helping with the class should contact Bob.

Ron Veys mentioned he would like to clean up Hyde and get rid of some of the extra stuff that has accumulated. This includes boxes of magazines, props, and other materials. Please look through these items and contact Mark or Ron if you would like to take some of them. At the next meeting Ron will set a date for removing and disposing of any remaining materials.

Sales of astronomy items (posters, etc.) have dropped off drastically at Hyde. A decision was made by the PAC Board to discontinue most of the items due to high cost and the difficulty of obtaining supplies. Lee Taylor is looking into continuing with some items that may be easier to sell such as star wheels, moon maps, and perhaps postcards.

Ron discussed several steps we are pursuing to increase membership. These include:

- Press releases about meetings and programs (underway by Mark Dahmke)
- Revising the club brochure (completed by Bob Leavitt)
- Astronomy class (planning underway)
- On-screen ads about the club between shows at Hyde (underway). Mark Dahmke displayed an ad that he is working on.
- Placing membership lists on the PAC web site (underway). This would make it easier for members to contact each other. This was discussed in the meeting and a decision was made to place the membership list, with phone numbers and email addresses, in the members-only area of the web site. Individual members will have an opportunity to OPT out of listing their phone number and email address. This will be announced in the next newsletter to give other members a chance to express their views and possibly OPT out.
- First year reduced membership fee. This was tried in the past with little success. Consequently, the PAC Board has decided to table this one for the time being.

Bob Leavitt reported that the Astronomical League has requested an updated PAC membership list. The AL uses this list to mail out The Reflector. There is a place on the list to indicate whether a member does or does not want to have their mailing address given to organizations outside the AL. The AL says they never share email addresses or phone numbers, just mailing addresses. At the meeting we decided to indicate on the membership list that all members do not want to share their mailing address. Anyone who wishes to OPT in and allow the AL to share their mailing address should contact Bob.

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

The meeting was adjourned to the program. Lee Taylor presented the March program: "The PAC Library". After the program it was suggested that the club should provide more information about the library to help encourage its use. This includes maintaining an online catalog along with the procedure for checking out materials.

Submitted by,
Bob Leavitt

Hyde Observatory Volunteer Schedule

Date	Team Leader	Operators		Supervisor	Events
April					
4/30/05	Steve Lloyd	Bob Kacvinsky	Joey Churilla	Dave Churilla	
May					
5/7/05	Dan Delzell	Jared Delzell	Josh Machacek		
5/14/05	Bob Leavitt	Joey Churilla	Steve Lloyd	Dave Churilla	
5/21/05	Bill Wells	AJ Benker	Cece Hedrick		
5/28/05	Jeff King	Jim Kvasnicka	Dave Brokofsky		
June					

6/4/05	Dan Delzell	Jared Delzell	Erica Block		
6/11/05	Bill Wells	Jim Kvasnicka	Dave Brokofsky		
6/18/05	Jeff King	Steve Lloyd	Joey Churilla	Dave Churilla	
6/25/05	Bob Leavitt	Bob Kacvinsky	Josh Machacek		
Summer Hours: April through September (Sundown to 11:00 PM)					
Winter Hours: October through March (7:00 PM to 10:00 PM)					

HYDE OBSERVATORY'S NEW TELESCOPE The Celestron NexStar 11GPS XLT Schmidt-Cassegrain - Dave Knisely

After several months of waiting, the observatory's new NexStar 11 inch f/10 Schmidt-Cassegrain telescope is up and running on the observing deck at Hyde. This is the first of a few major steps Hyde is taking towards the future of the facility. The telescope saw its first public use on Saturday April 16th to rave reviews, providing spectacular views of the moon, Saturn, Jupiter, and a number of double stars and deep-sky objects. Even the "Human Go-To" (Joey Churilla) was impressed with how the scope worked. The instrument is a fully equipped electrically slewed and pointed system, which can operate, in a full Go-To mode to slew and point itself to almost any object we desire. The telescope is also mounted on a telescoping Pier Tech electrical pier, which can raise the scope to a convenient height with just a push of a button. It can go from a low "wheelchair-accessible" position to a high point where it can almost look over the edge of the deck walls. In addition, we can remotely control the telescope via a laptop computer for additional flexibility, and the instrument will eventually be the heart of imaging systems like CCD cameras and video feeds back into the main lecture hall. This new scope is just one reason why club members should at least think about getting involved with helping out at Hyde.

Installation took a while, as on April 2nd, a crew headed by Club President Ron Veys had to remove the old 12 inch Newtonian and drill new anchor holes for the Pier Tech adjustable pier. However, for some reason the pier did not want to go up and down. The following Wednesday evening, Brian Sivill ("We'll fix this thing!"), Lee Taylor ("My flash doesn't work!"), and I got down to the business of installing the scope. After an inspection of the pier, we didn't see anything significant, so I fired up Hyde's computer and got Pier Tech's phone number. Brian called it, and surprisingly, he got a hold of the guy who builds the piers (this was about 7:30 p.m.). He gave us instructions on how to take the pier apart to examine things, and indicated that a disconnected internal cable might be the problem. When we got the ends off and pulled out the guts of the pier, it was sadly obvious as to what the problem really was. The interior "motor control box" was damaged, probably from a shipping accident. One large side section of the box's plastic housing was completely broken out, and one of the connectors was disconnected. The control box contains the unit's PC board and a large toroidal transformer about the size of a softball, which was now sort of "floating" free inside the box (it appears to have been originally glued or mounted to the side of the interior of the control box). Brian managed to secure the transformer back into a stable position in the box with many windings of electrical tape (it is *not* going anywhere and is well insulated), as well as inspecting, reconnecting, and properly tie-wrapping all the cables. The PC board looked intact and I tested the fuse and found it to be OK, so Brian reassembled the interior parts and put power to the drive system before we reinstalled it in the pier. The pier's drive mechanism is a long motor-driven helical screw, and we were very relieved to see it move when we hit the hand controller button! Brian and I put the guts back into their proper location in the pier and we bolted it back down to the floor. At last, the pier moved smoothly up and down over its entire movement range with no problems.

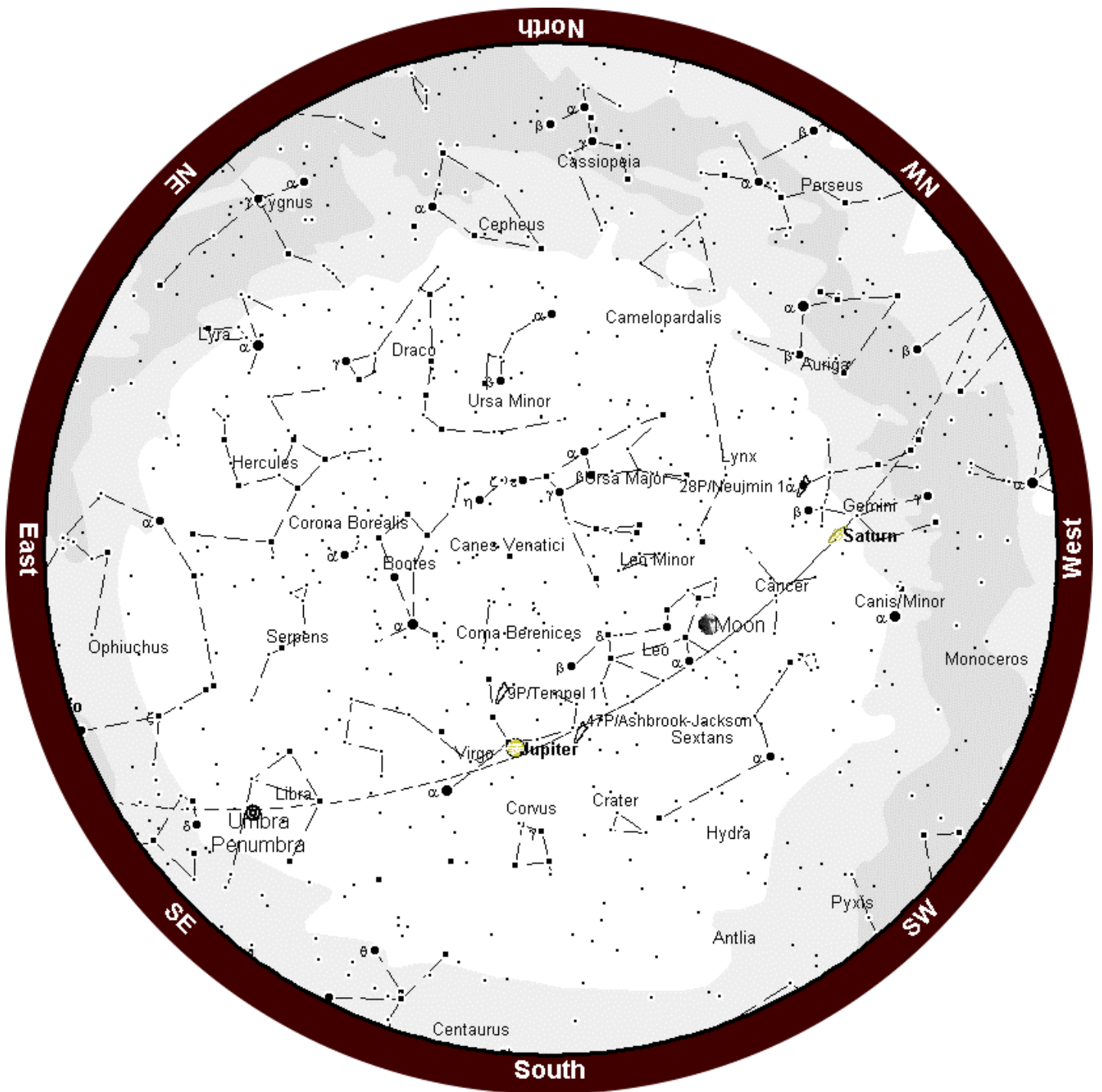
After a lot of grunting, moving, lifting, and an extended discussion of how the azimuth lock and power switch should be oriented, we got the APT wedge and the NexStar telescope itself properly mounted on the pier. It took us from about 6:30 p.m. to around 9 p.m. before things were about ready for final testing, and we even got lucky in that the sky got just clear enough to roll the roof and test things out with our "First Light" ceremony. After a quick trip to Runza for a break and a bite to eat (Astronomers get *really* hungry when installing scopes), first light occurred at about 9:30 p.m. and the first light target was Capella (and the second light target, and the third light target, until we finally got the equatorial alignment to behave itself). We got the wedge polar aligned, and everything is now pretty much ready for use. However, the telescope is designed to be only operated electrically, so it may only be run by properly trained staff. If you wish to help with Hyde, now is the time. Contact Dave Churilla and he will see that you get the training you may need.



Astronomy Day – April 17th 2005



April Star Chart



Events Calendar

May 2005						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 	2 	3 	4 	5 	6 	7 
Sun: 18:24 - 08:22	Sun: 18:22 - 08:23	Sun: 18:21 - 08:24	Sun: 18:20 - 08:25	Sun: 18:19 - 08:26	Sun: 18:18 - 08:27	Sun: 18:16 - 08:28
					Club Star Party	Hyde Observatory open to the public
8 	9 	10 	11 	12 	13 	14 
Sun: 18:15 - 08:29	Sun: 18:14 - 08:30	Sun: 18:13 - 08:31	Sun: 18:12 - 08:32	Sun: 18:11 - 08:33	Sun: 18:10 - 08:34	Sun: 18:09 - 08:35
		Venus Close to Pleiades			Mahoney Star Party	Hyde Observatory open to the public
15 	16 	17 	18 	19 	20 	21 
Sun: 18:08 - 08:36	Sun: 18:07 - 08:37	Sun: 18:06 - 08:38	Sun: 18:05 - 08:39	Sun: 18:05 - 08:40	Sun: 18:04 - 08:41	Sun: 18:03 - 08:42
Mars Close to Uranus		Venus Close to Aldebaran			Moon Libration West, also close to Jupiter	Hyde Observatory open to the public
22 	23 	24 	25 	26 	27 	28 
Sun: 18:02 - 08:43	Sun: 18:02 - 08:44	Sun: 18:01 - 08:45	Sun: 18:00 - 08:45	Sun: 18:00 - 08:46	Sun: 17:59 - 08:47	Sun: 17:58 - 08:48
						Mercury Close to Pleiades; Hyde Observatory open to the public
29 	30 	31 				
Sun: 17:58 - 08:49	Sun: 17:57 - 08:50	Sun: 17:57 - 08:50				
	Eta-Aquarids	PAC Meeting 7:30pm				

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).

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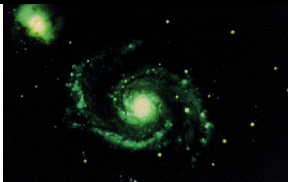
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First Class Mail

Next PAC Meeting
April 26, 2005
7:30 PM
Hyde Observatory

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