

The Prairie Astronomer

The Official Newsletter Of The Prairie Astronomy Club, Inc.

September 2003

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SEPTEMBER PROGRAM

September program: Cece Hedrick -- "What I did on my summer vacation at Kitt Peak National Observatory."

CLUB EVENTS

Mahoney Star Party

Friday, September 19, 2003

Club Star Party

Friday, September 26, 2003

PAC Meeting 7:30pm

Tuesday, September 30, 2003

PAC/OAS Banquet 7:30pm

Friday October 10, 2003
Helene Sapp Riverview Lodge

Club Star Party

Friday, October 24, 2003

PAC Meeting 7:30pm

Tuesday, October 28, 2003

PAC-LIST: If you have an e-mail address and are not on the PAC List, you may subscribe by submitting an e-mail to list@4w.com. Write "Subscribe PAC-List" in the body of the e-mail.

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 Liz Bergstrom at 464-2038. Mark Dahmke or Liz can 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 \$20/yr, Family \$22/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 — Lee Taylor

Minutes for the meeting of August 26, 2003

President Dave Knisely called the meeting to order

Two new visitors, Rock Castellano and Joe Reynolds

The next club meeting will be Tuesday Sept 30, 2003

The UNL student observatory will be open to the public tonight and tomorrow night for Mars closest approach to Earth

The Astronomical League has awards available for several different observing programs, including the well-known Messier club as well as some new ones, such as the Earth Satellite club. For more information, contact our observing chair, Jeff King.

Program chair, Brian Sivill is always looking for new programs if you've done something astronomically interesting, and would like to share your experience, contact Brian.

Hyde volunteer coordinator, Dave Churilla says he would like help from members of PAC with telescopes for tonight and the next several Saturdays as Mars is expected to draw rather large crowds. More 'scopes on the lawn would really take some pressure off the deck. Also, if you're interested in becoming a regular Hyde volunteer, let him know and he'll help you get started.

Treasurer's Report: orders for club apparel are due WITH PAYMENT by Sept. 15 Make sure you get your payment to Liz by then. Astronomy Magazine subscriptions are \$29.00 annually through the club and Sky & Telescope has increased to \$32.95.

Both of PAC's telescopes are available. The club reflector is at Hyde and Lee Taylor has the club refractor. If you'd like to check either telescope out, contact Dave Brokofsky.

The Washiska Audubon Society will be holding its annual Twilight on the Tall Grass event Saturday Sept. 6 at Spring Creek Prairie. Those who wish to help out should contact Erik Hubl.

Jeff Campbell has been very busy this past month. On July 20, he helped with using the club 'scope at Camp Kindle and on August 16 at Louisville showing the sky to some of the campers who asked for our help that night. This event was also attended by John Johnson of OAS. This event was very successful, netting \$27.00 in donations for both clubs. Discussions are under way for a repeat of this next year.

Larry Hancock has set the date for this year's fall PAC-OAS banquet for Oct. 11 at the Helleen Sapp Riverview Lodge at Mahoney state park. He'll be mailing out invitations and RSVP forms in the next few weeks. Cost is \$9.00

Motion to adjourn and second. Adjourn to Hyde's new show on findings of the recent and future orbiters and landers to Mars. Also, several members set 'scopes up outside for the public showing of the Mars closest approach.

Respectfully submitted by,

Lee Taylor

Hyde Observatory Volunteer Schedule

Date	Team Leader	Operators		Supervisor	Events
September					
9/20/03	Bob Leavitt	Josh Machacek	Erica Block	Dave Hamilton	
9/27/03	Jeff King	AJ Benker	Lynda Beck	Rick or Dave	
October					
10/4/03	Bill Wells	Karla Bachman	Steve Lloyd	Brian Sivill	
10/11/03	Bob Leavitt	Erica Block	Josh Machecek	Dave Hamilton	
10/18/03	Jeff King	Joey Churilla	Karla Bachman	Dave Churilla	
10/25/03	Dan Delzell	Jared Delzell	Lynda Beck	Rick Johnson	
November					
11/1/03	Jeff King	Erin Miles	Jeff Campbell	Brian Sivill	
11/8/03	Scopes on Lawn	Joey Churilla			Total Lunar Eclipse
11/8/03	Bob Leavitt	Steve Lloyd	AJ Benker	Dave Churilla	Total Lunar Eclipse
11/15/03	Bill Wells	TBA	Karla Bachman	Dave Hamilton	
11/22/03	Dan Delzell	Jared Delzell	Erica Block	Rick Johnson	
11/29/03	Brian Sivill	Jeff Campbell	Josh Machacek	TBA	
Summer Hours: April through September (Sundown to 11:00 PM)					
Winter Hours: October through March (7:00 PM to 10:00 PM)					

Mars Mania at Hyde Observatory– Dave Knisely

Ladies and Gentlemen of the Club:

**** WE HIT IT OUT OF THE BALL PARK LAST NIGHT!!*** :-)

I will say that this was probably one of the best nights at Hyde I have ever had since we opened 25 years ago. The crowds were big (but well-handled), the extra scopes were there (about 6 from the club were operating at one point, with two others on stand-by, ready to use if needed), and the seeing cooperated in a way that I had not anticipated earlier in the day. The afternoon had me thinking "cloudy", but something convinced me to load the 10 inch up and bring it anyway. Boy, am I glad I did that! After a few minor computer problems, we got the regular club meeting underway, followed by the presentation of Lee Thomas's MARS 2003 show, which by all accounts is of exceptional quality (and you thought you were the only one doing reviews Lee :-)). While it ran, some of us started to get things ready for the public, who, as usual, tended to arrive early and stay late. The sunset was beautiful, as the clouds that had been threatening were moving well off to the south, with only a little high cirrus left over. I had worked up until 5 a.m. the previous morning to get my VistaPro MARTIAN TOUR up and running on my computer, which spent 6 hours out in front by the sidewalk letting people in line get a feel for what it is like to stand on various places on the surface of Mars.

We started setting up our scopes on the grass, taking various guesses as where the best place to put them would be. I then left for a bit to get something from Runza (everyone else was snarfing-down Pizza). Even before we got set up, there were visitors coming, as I saw as I drove back into the park a full hour before we were scheduled to officially open. I had my 10 inch f/5.6 Newtonian set up next to Jeff King's 10 inch LX-200 SCT. Doug Bell had his new 5 inch APO refractor up, with Dave Churilla's 10 inch Meade Dob just to its north. Lee Taylor had both his 8 inch Newtonian and the club's 4 inch refractor going, with help from a couple of other people. John Lammer's had his 8 inch in his van, but didn't set it up, as he spent a lot of time "babysitting" my computer as it ran its slide show. We probably had over 100 people at the Observatory before Mars even rose. Visitors started filing in, so Erik ran the new Mars Show inside

the lecture room while we waited for Mars to rise high enough to put the scopes on it. Doug and I went up the hill behind the Observatory to see if we could see Mars peeking over the big dirt berm. There was a bank of low clouds in the southeast, which hid the actual rising, but finally, with binoculars, we started to see it peek through the haze low in the southeast. Not long afterward, things got rather active, as the people began to arrive in droves. The lawn was pretty thick with the public, and the line stretched out of the observatory and down the sidewalk, curving off on the street to the north. Both parking lots were full rather early, and people had to park well north along the road. The people kept coming and coming at a rather steady rate for most of the night until probably about 20 minutes prior to our 2:30 a.m. closing when it started to taper off. Estimates of attendance passed 500 around 10:30 p.m., and were passing 800 before midnight. The most startling (and satisfying) thing was that the people were *very* pleased with what they were seeing. The seeing was good enough that with my 10 inch, I was able to *start* with 353x and go up from there. I started with the Sirius Optics NPC filter, which helped the color contrast. We could see Sinus Sabaeus initially with Sinus Meridiani almost at the center of the disk. People noted the polar cap immediately at almost all the powers we were using, and could actually see the dark markings without much prompting. I was able to point out that Sinus Meridiani was where the second Mars Rover was going to land. What seemed to impress a lot of people (particularly the kids) was the rapid "motion" of Mars in my undriven Newtonian! That almost got more "WOW!" comments than the overall view of the planet! Contrast seemed a bit low, so I put in my reddish-orange filter (Wratten 23a), and the contrast of the dark markings went way up. As Mars rotated, people began to comment on how much more detail they were seeing, so I kicked things up to over 400x. Solis Lacus was noted by many people with ease, as they all agreed it looked like an eye, with the arc of dark detail over it looking like the eyebrow. I had to keep pushing my scope to keep Mars in the field, but during those brief looks, I could see that the seeing was *very* good at times. The Coprates/Tithonius Lacus complex was quite easy, with many fine spot-like details visible in many places on the disk. I was quite pleased, as near the end of this long session, I could barely see the lighter spot of Olympus Mons coming around the limb! All in all, we got a tremendous number of complements and hearty "thank-you's" from almost every person who looked in our scopes, so it was definitely worth the effort this club put in. It was also a lot of fun doing all this, so from a personal standpoint, I enjoyed every minute.

As a club, we should be rightfully proud of the success of this event, but we should still be mindful that Mars is still around and Hyde will need our continuing attention in the weeks to come. I want to thank Eric Hubl, Dave Churilla, Lee Taylor, John Lammers (thanks for the use of the 2" Powermate), Doug Bell, Jeff King, Ron Veys, Jeff Campbell, and all the others who helped out at Hyde on Tuesday night. Those of you who are thinking about coming out to help at Hyde should go ahead and stop by on our Saturday night openings. You too may find it an enjoyable experience.

Hyde Solar Array in Operation for Six Months— Erik Hubl

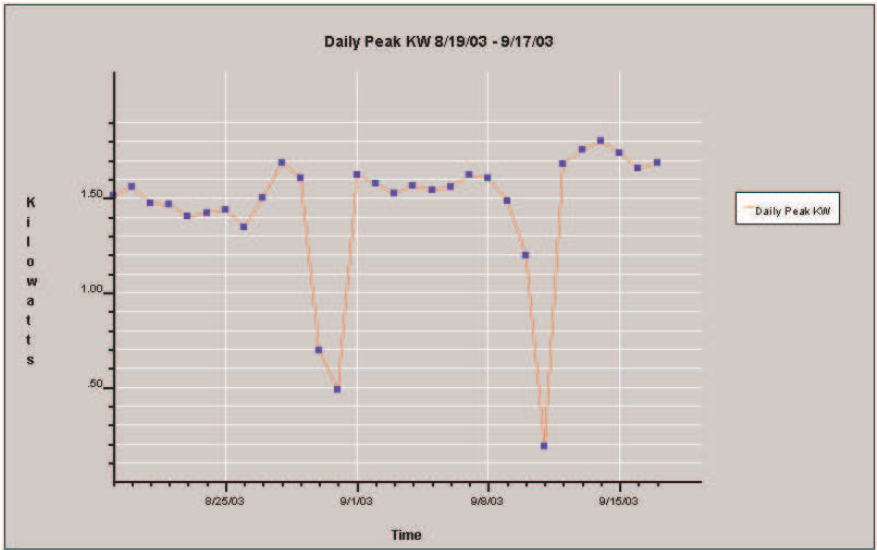
September 15th marks the 1/2 solar year point for electrical generation at Hyde Observatory. But only half of the story can be told. As the sun gets lower in the sky we expect to see an increase in energy production since the sun will strike the panels more directly.

The system has performed very well despite an inverter failure one month into operation. That knocked out about one week of production. Another issue was when the air conditioner was turned on without being checked first and it ran continuously for several days. It needed a freon charge. That dropped 13% off of the amount of energy that the system provides Hyde.

And through the hot summer nights with over 2,500 visitors to Hyde to view the Mars opposition we continued to drop that percentage to just below 50%. But the system was expected to supply about half of Hyde's electrical need. That percentage should continue to climb now as the sun becomes more perpendicular and the nights become cooler.

Mark Dahmke from Information Analytics Inc. has written some code to extract data from the system so we can portray a 30-day history of Peak kW. You can view this graph at

<http://pv.hydeobservatory.info/hydeobservatory/dailypeak.asp>

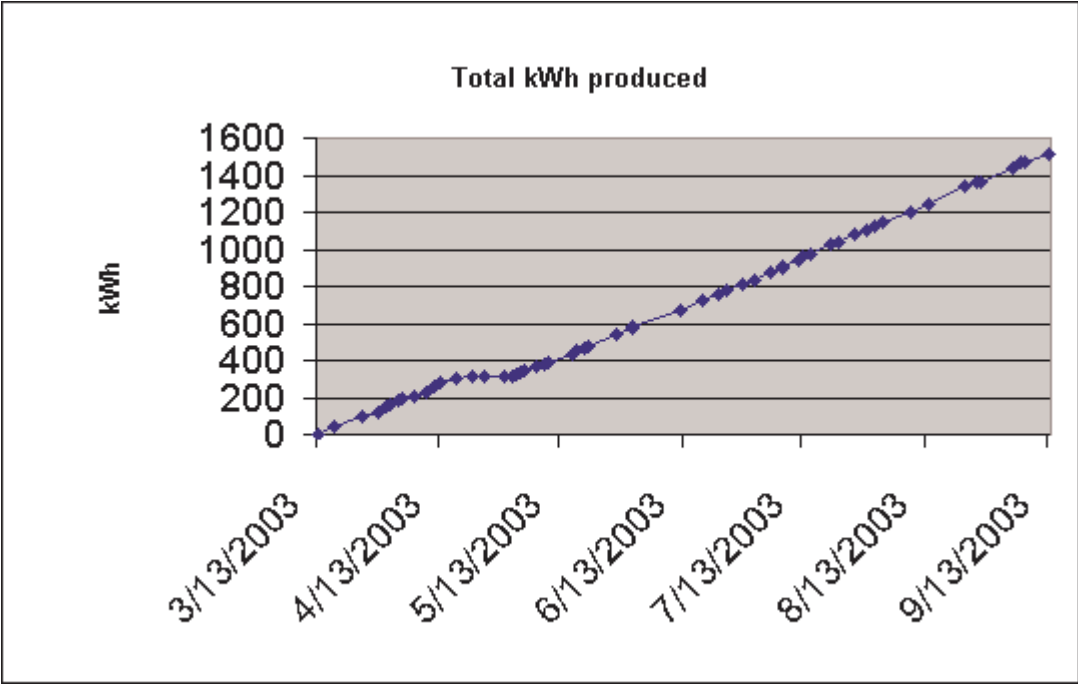


We plan on adding more graphs and interpretations in the future.

The Sunny Boy system manufacturer has added Hyde's project to its website along with links to Hyde and LES.

See: <http://www.sma-america.com/> and click on "Installation Photos" in the blue sidebar.

We will continue to monitor it and study the operation. At the completion of one year a formal report needs to be prepared. I believe there is much that we can learn about Hyde's Photovoltaic Project.



September Star Chart



Events Calendar

October 2003						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 	2 	3 	4 
			Sun: 07:22 - 19:10	Sun: 07:23 - 19:09	Sun: 07:24 - 19:07	Sun: 07:25 - 19:05
					Mercury greatest illum. extent	Hyde Observatory open to the public
5 	6 	7 	8 	9 	10 	11 
Sun: 07:26 - 19:04	Sun: 07:27 - 19:02	Sun: 07:28 - 19:00	Sun: 07:30 - 18:57	Sun: 07:31 - 18:56	Sun: 07:32 - 18:54	Sun: 07:33 - 18:52
		Mars 3.6 deg SE of Uranus				Hyde Observatory open to the public
12 	13 	14 	15 	16 	17 	18 
Sun: 07:34 - 18:51	Sun: 07:35 - 18:49	Sun: 07:36 - 18:48	Sun: 07:37 - 18:46	Sun: 07:38 - 18:45	Sun: 07:39 - 18:43	Sun: 07:40 - 18:42
						Hyde Observatory open to the public
19 	20 	21 	22 	23 	24 	25 
Sun: 07:41 - 18:40	Sun: 07:42 - 18:39	Sun: 07:44 - 18:37	Sun: 07:45 - 18:36	Sun: 07:46 - 18:34	Sun: 07:47 - 18:33	Sun: 07:48 - 18:32
		Orionid meteor shower; Orionid meteor shower			Club Star Party	Hyde Observatory open to the public
26 	27 	28 	29 	30 	31 	
Sun: 06:49 - 17:30	Sun: 06:50 - 17:29	Sun: 06:52 - 17:28	Sun: 06:53 - 17:26	Sun: 06:54 - 17:25	Sun: 06:55 - 17:24	
		PAC Meeting 7:30pm				

**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
OF THE PRAIRIE ASTRONOMY CLUB**

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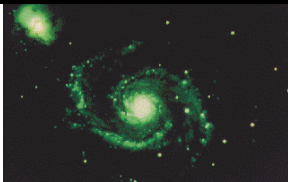
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**The Prairie Astronomer
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First Class Mail

**Next PAC Meeting
September 30, 2003
7:30 PM
Hyde Observatory**