



THE PRAIRIE ASTRONOMER

The Official Newsletter Of The Prairie Astronomy Club, Inc.

November 2005

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 Hyde Observatory www.hydeobservatory.info
 NEB-STAR www.neb-star.org

Club Events

November PAC Meeting

Tuesday, November 29, 2005

7:30pm @ Hyde Observatory

Jack Dunn: Aeronautics and Astronautics - fun in the sky both ways.

Club Star Party

Friday, December 02, 2005

UNL Student Obseravtory Open

Friday, December 16, 2005 7:30-10pm - Mars

December PAC Meeting

MOVED TO MONDAY!

Monday, December 26, 2005

7:30pm @ Hyde Observatory

Meeting date moved to Monday.

Guest speaker will be Larry Stepp.

Program

Aeronautics and Astronautics - fun in the sky both ways.

Jack Dunn will show some great aeronautical acrobatics and review some latest space program news and history (via the Kansas Cosmosphere).

NOTE: THE DECEMBER MEETING has been moved to Monday, December 26th. The speaker will be Larry Stepp, who will update us on the Thirty Meter Telescope Project (TMT)

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

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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 no visitors. Ron discussed upcoming club events:

- The next club star party will be November 4th at Jim Kvasnicka's family farm.
- A special Mars event will be held at Hyde Observatory on October 29th. A large crowd is expected and extra help is being arranged. Dave Churilla has several people signed up to bring scopes and work the deck. If anyone would like to help they should contact Dave.
- The next club meeting will be November 29th.
- The UNL student observatory will be open to the public on October 28th and November 4th.

Mark Dahmke will be installing CAT5 wiring from the control room to the Nexstar scope on the deck. Using a laptop computer and webcam at the Nexstar, we will now be able to display remote images on the video projector in the meeting room. First use of this new setup is planned for the Mars event at Hyde.

Treasurer's report: Lee Thomas reported the following account balances:

Main PAC checking account: \$801.88
Hyde checking: \$84.18
Hyde savings: \$1922.50
PAC savings: \$11,487.77
CD 1: \$16,082.81
CD 2: \$3,556.55

Total: \$33,935.69

Hyde Observatory is open Saturdays from sundown to 10:00 pm. If you'd like to help at Hyde, contact volunteer coordinator Dave Churilla

Homestead National Monument will be having their annual Halloween special on Saturday, October 29th. They would like to have several telescopes set up for the public. Homestead will donate \$100 to the club for our participation. Lee Taylor, Dave Knisely, and John Lammers are currently signed up for the event. Contact Lee Taylor if you would like to participate.

Ron reviewed upcoming observing highlights for the month of November.

Elections were held for the PAC board for next year. The following individuals were elected:

President: Ron Veys
Vice-President: Mark Dahmke
2nd Vice-President: Jack Dunn
Secretary: Bob Leavitt
Treasurer: Lee Thomas

The meeting was adjourned to the program. Martin Gaskell presented the program "Mars 2005".

Submitted by,
Bob Leavitt

Club Telescopes – Checkout Policy

To check out one of the club telescopes, contact Mark Dahmke (475-3150) or mdahmke@4w.com. If you keep a scope for more than a week, please check in with Mark once a week, to verify the location of the telescope and how long you plan to use it. The checkout time limit will be two weeks, but can be extended if no one else has requested use of a club scope.

Hyde Observatory Volunteer Schedule

Date	Team Leader	Operators		Supervisor	Events
November					
11/26/2005	Bill Wells	Bob Kacvinsky	Josh Machecek	Dave Brokofsky	
December					
12/3/2005	Jeff King	Dave Brokofsky	Jim Kvasnicka	Dan Delzell	
12/10/2005	Bob Leavitt	Joey Churilla	Bob Kacvinsky	Dave Churilla	
12/17/2005	Bill Wells	Josh Machecek	Jeff King		
12/24/2005	CLOSED				
12/31/2005	CLOSED				
January					
1/7/2006	Dave Hamilton	Dave Brokofsky	Joey Churilla	Dave Churilla	
1/14/2006	Bill Wells	Jim Kvasnicka	Bob Kacvinsky		
1/21/2006	Bob Leavitt	Josh Machecek	Steve Lloyd		
1/28/2006	Jeff King	Mitch Payne	Dan Delzell		
Summer Hours: April through September (Sundown to 11:00 PM)					
Winter Hours: October through March (7:00 PM to 10:00 PM)					

Martin Gaskell's Program at the October Meeting – Bob Leavitt

For those who missed the October meeting, Martin Gaskell's talk covered both historical and current observations of Mars using images from the past and present. A wide variety of pictures from Martin's collection were augmented by images from Mariner, Viking, and the current Mars orbiters and rovers. It was interesting to compare the quality of images available in the pre-digital film era with those produced today via web cam and CCD. The second part of Martin's talk covered video web cams and image processing software. Martin conducted a demonstration using a Philips web cam and a laptop computer with Registax software. He showed how these powerful and inexpensive tools can be used to produce high quality images of Mars.

He aimed a Phillips To-U-Cam at an old 1960s Lunar and Planetary Lab photo of Mars in a book while Kevin Dowd wiggled the book around to simulate bad seeing. A few minutes later we ended up with a photo on the computer screen that not only was not blurred by the "seeing" but was, according to quite a few people in the audience, sharper than the original in the book!

Mars Opposition, October 29th at Hyde Observatory– Dave Churilla

We had a good night last night, as Jack mentioned to the Supervisors, with something over 150 people stopping out (perhaps nearing 200). Those that waited it out or came later were treated to pretty nice views of Mars. And the Web Cam was a hit on the Deck.

We started off showing Venus on the Laptop & Big Screen in the presentation room, then when it clouded over we hit Vega. Actually, people were entranced, I think more with the novelty of seeing it "LIVE" on the Laptop screen. For a long time we were clouded, Joey showed "home" movies we had on the Laptop of our raw footage through the Web Cam and from our 10" Dob of Io's Transit of Jupiter, Jupiter and the Red Spot, the Moon, Saturn and the Sun (H-Alpha). It kept about 50-100 people entertained.

But we hit some clear areas off and on for about 45 minutes and I have to say, Mark Dahmke was right...the Web Cam did show more detail than the C-14 did (well, perhaps not so much more, it was just easier to see), and people really loved it. In fact, despite the warm temperature, many were sitting in the Lecture Room listening to Jack talk about Mars and watching the image from the NexStar on the Big Screen. It was really way too cool...sorry, the Valley Girl in me coming out. The only problem was the logjam at the door of people waiting to look through the C14 AND at the Laptop. But the Laptop needs to be close the NexStar for ease of focusing. We may move the Laptop to the south end (we had it by the door) to try to ease congestion (but that puts people in front of the C14).

Anyway, we told more than half the people out there that we'll still have great views of Mars next week (and for several months actually – many thought last night was the only night to view) and that we'd still set up the Web Cam next week just because last night was clouded out. In fact, many left while the clouds still prevailed with intentions of coming out next week. If it's clear, and with the press Jack will attempt to gain, I suspect that we could top 200 patrons next week. Currently, Dan Delzell is scheduled as the Supervisor and Joey, myself and Jim are scheduled for the Deck.

Club Store Now Open – Mark Dahmke

Now you can order club apparel, mouse pads, mugs and other items at any time, through our store on Cafepress.com. To access the store, click on the "Club Store" button on the left menu bar on the members-only page, or you can get there through [cafepress.com](http://www.cafepress.com), or:

http://www.cafepress.com/pac_lincoln

The store currently includes t-shirts, sweatshirts, golf shirt, long sleeve t-shirt, a coffee mug, mouse pad, caps and a tote bag, all with the club logo. Other items will be added soon. Cafepress just today announced the availability of black t-shirts. At the top of the page you will see the PAC logo on white and black backgrounds, which is how it will appear on the items in the store.

Periodically we will change the designs for things like the mouse pad and mug, but the shirts and caps will always be available. Also as we've done in the past (usually once a year), the club treasurer will take orders for shirts, caps, etc. By placing a larger order at one time we can save money on shipping.

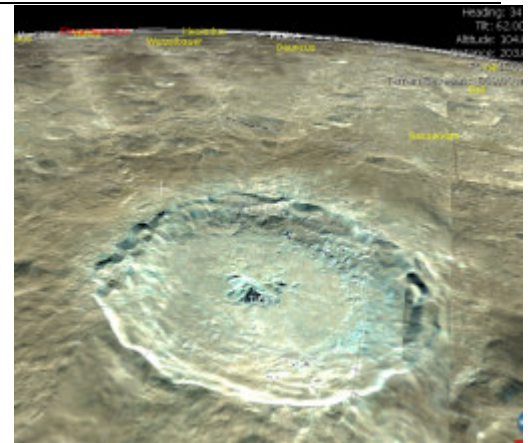
Please take a look at the store and let us know what you think, and what other items or designs you'd like to see.



NASA Internet Software Zooms to moon Images in 3-D

Internet users can now take virtual 3-D trips to nearly anyplace on the moon, thanks to a NASA program first designed to show aerial views of the Earth.

The newly expanded NASA 'World Wind' computer program can 'transport' Web users to almost anyplace on the moon, when they zoom in from a global view to closer pictures of our natural satellite taken by the Clementine spacecraft in the 1990s. Computer programmers at NASA Ames Research Center in California's Silicon Valley originally designed the World Wind program to deliver satellite images and data of Earth to the Internet. Users can see detailed 3-D pictures of the Earth's land surface, including its elevation and climate.



View of Tycho from 100km

"We have just digested the best of the Clementine images, so we can now deliver the moon at 66 feet (20 meters) of resolution," said Patrick Hogan, manager of the World Wind Project Office at NASA Ames. "This is a first. No one has ever explored our moon in the 3-D interactive environment that World Wind creates," noted Hogan.

Launched in early 1994, Clementine took 1.8 million pictures of the lunar surface during a two-month orbit of the moon. The Ballistic Missile Defense Organization and NASA jointly sponsored the Deep Space Program Science Experiment that included the Clementine spacecraft. Its principal objective was to 'space-qualify' lightweight imaging sensors and component technologies for the next generation of Department of Defense spacecraft.

"Imagine riding a magic carpet through the world and being able to zoom down to any point, or appear magically at any location. That's what World Wind is like," said Mark Leon, chief of the Education Division at NASA Ames. "Not only has Hogan's team produced new technology with World Wind, but they have done so as open source computer code, so it is free for all who would download it," Leon added.

"NASA World Wind allows users to explore their (computer) environment at will," Hogan said. "This leads to much greater engagement with, and by, the users and personalizes it for their own discovery." In contrast, movies are not as engaging, or immersive, in that the user does not control them, Hogan observed.

The personal computer (PC) -compatible World Wind program is available free of charge via Internet 'download.' Computer users from more than 100 nations have acquired the free World Wind program, though most users are from the United States. To download World Wind, visit: <http://worldwind.arc.nasa.gov/>

NASA World Wind is delivering terabytes of global NASA satellite data that are a result of years of daily observations of precipitation, temperature, barometric pressure and much more. Recently, hurricane Katrina data have been added to World Wind's collection of images. There are an estimated 10,000 daily users of World Wind.

In addition to improving World Wind by adding images of the moon, NASA programmers recently have increased the resolution of images of Earth from 3,281-foot (one-kilometer) resolution to 1,640-foot (500-meter) resolution in an upgrade called 'Blue Marble, Next Generation Earth.' Also, some World Wind data sets include images of the entire Earth at 49-foot (15-meter) resolution. The United States data in World Wind is at 3.3-foot (one-meter) resolution with some urban areas at one-foot (0.33-meter) resolution.

World Wind has been enabling hundreds of thousands of Internet users to zoom from satellite altitude into any place on Earth to see across the Andes, into the Grand Canyon, over the Alps or along the African Sahara. World Wind accesses public domain United States Geological Survey aerial photography and topographic maps as well as Shuttle Radar Topographic Mission and Landsat satellite data.

Astronomers Assemble Fine Collection of 'Einstein Rings'



You can look but you can't touch the new rings discovered by JPLer Dr. Leonidas Moustakas and his colleagues. The team used data from NASA's Hubble Space Telescope and the Sloan Digital Sky Survey to locate, among other objects, galaxies whose light has been warped into circles called "Einstein rings."

Events Calendar

December 2005						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 	2 	3 
				Sun: 07:31 - 16:59	Sun: 07:32 - 16:59	Sun: 07:33 - 16:59
					Club Star Party; Cygnids Meteor Max	Hyde Observatory Open to the Public
4 	5 	6 	7 	8 	9 	10 
Sun: 07:34 - 16:59	Sun: 07:35 - 16:58	Sun: 07:36 - 16:58	Sun: 07:37 - 16:58	Sun: 07:38 - 16:58	Sun: 07:39 - 16:58	Sun: 07:40 - 16:58
Moon close to Venus						Hyde Observatory Open to the Public
11 	12 	13 	14 	15 	16 	17 
Sun: 07:40 - 16:59	Sun: 07:41 - 16:59	Sun: 07:42 - 16:59	Sun: 07:43 - 16:59	Sun: 07:43 - 16:59	Sun: 07:44 - 17:00	Sun: 07:45 - 17:00
Moon Close to Mars	Moon - Immersion of Zet Ari	Moon Close to Tau1 Ari	Geminids Meteor Max		UNL Student Observatory Open	December Ursids Meteor Shower; Hyde Observatory Open to the Public
18 	19 	20 	21 	22 	23 	24 
Sun: 07:45 - 17:00	Sun: 07:46 - 17:01	Sun: 07:46 - 17:01	Sun: 07:47 - 17:02	Sun: 07:47 - 17:02	Sun: 07:48 - 17:03	Sun: 07:48 - 17:03
			Moon Close to Antares			
25 	26 	27 	28 	29 	30 	31 
Sun: 07:49 - 17:04	Sun: 07:49 - 17:05	Sun: 07:49 - 17:05	Sun: 07:50 - 17:06	Sun: 07:50 - 17:07	Sun: 07:50 - 17:08	Sun: 07:50 - 17:08
	December PAC Meeting		Quadrantids Meteor Shower			

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
OF THE PRAIRIE ASTRONOMY CLUB**

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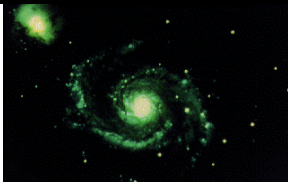
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**The Prairie Astronomer
c/o The Prairie Astronomy Club, Inc.
P.O. Box 5585
Lincoln, NE 68505-0585**

First Class Mail

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

«TITLE» «FIRSTNAME» «MIDDLENAME» «LASTNAME» «RENEWALDATE»
«CAREOF»
«ADDRESS1»
«ADDRESS2»
«CITY», «STATE» «ZIP»