

THE PRAIRIE ASTRONOMER

The Official Newsletter Of The Prairie Astronomy Club, Inc.

July 2006

Volume 47 Issue #7

Internet Addresses

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

Club Events

Nebraska Star Party

July 23-28, 2006

Club Star Party

Friday, July 21, 2006

PAC Club Meeting

Tuesday, July 25, 2006 7:30pm

Mahoney Star Party

Friday, August 18, 2006

Mahoney State Park

Club Star Party

Friday, August 25, 2006

PAC Club Meeting

Tuesday, August 29, 2006 7:30pm

Program

“Portable Astronomical Equipment for the Classroom Environment”

David Pares will talk about the equipment he uses in the college classroom, including radio telescopes, radiometer station, video and ccd cameras, and laptop software.

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

Mahoney Star Parties

August 18, September 15.

PAC/OAS Banquet

Sunday October 15, 2006
at the Strategic Air and Space Museum

Contents:

Secretary’s Report 2
 Club Telescopes – Checkout Policy 2
 Hyde Observatory Volunteer Schedule 3
 Ticked Off Over Observing! –Martin Gaskell 3
 NASA Marks 30th Anniversary of Viking Mission 5
 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

Vice President Mark Dahmke called the meeting to order. There was 1 visitor. Mark discussed current and upcoming club events:

- The UNL Student Observatory will be open July 7 and August 4.
- The next Mahoney Star Party will be July 14. This is a public outreach activity jointly sponsored by PAC and OAS. Telescopes are set up near the golf driving range at Mahoney State Park. Additional MSP's are scheduled for August 18 and September 15.
- The next club star party will be held July 21 at the farm.
- The next club meeting will be Tuesday, July 25.
- The Nebraska Star Party is scheduled for July 23 – 28.
- The PAC/OAS Annual Banquet is scheduled for October 15 at the SAC Museum.

Treasurer's report: No report this month.

Hyde Observatory is open Saturdays from sundown to 11:00 pm (summer hours). If you'd like to help at Hyde, contact volunteer coordinator Dave Churilla.

Martin Gaskell has started a project to build a remotely operated observatory. The observatory will be located at a site south of Beatrice, and will use a dome that was donated by a Lincoln couple. He hopes to complete the project in a couple of months.

Mark reviewed upcoming observing highlights for the month of July.

The meeting was adjourned to the program. Jack Dunn and Erik Hubl presented "Lighting 101", a program about light pollution, the Lighting Task Force, and Lincoln's proposed new lighting ordinance.

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
July					
7/22/2006	Bill Wells	Josh Machacek	Dave Brokofsky	Martin Gaskell	
7/29/2006	Dave Churilla	Joey Churilla	Mitch Paine	Martin Gaskell	
August					
8/5/2006	Bob Leavitt	Mitch Paine	Dave Brokofsky	Steve Lloyd	
8/12/2006	Dave Churilla	Joey Churilla	Bob Kacvinsky	Martin Gaskell	
8/19/2006	Dave Hamilton	Jim Kvasnicka	Josh Machacek	Jack Dunn	
8/26/2006	Bill Wells	Jeff King	Dan Delzell	Dave Brokofsky	
September					
9/2/2006	Bob Leavitt	Jim Kvasnicka	Josh Machacek		
9/9/2006	Dave Churilla	Joey Churilla	Bob Kacvinsky		
9/16/2006	Jeff King	Mitch Paine	Josh Machacek	Steve Lloyd	
9/23/2006	Bill Wells	Steve Lloyd	David Brokofsky	Dan Delzell	
9/30/2006	Dave Churilla	Joey Churilla	Dan Delzell		
Summer Hours: April through September (Sundown to 11:00 PM)					
Winter Hours: October through March (7:00 PM to 10:00 PM)					

Ticked Off Over Observing! –Martin Gaskell

For years I would go out into a field on a clear night, set up a telescope in the grass, and crouch down or kneel on the grass as I aligned the telescope or found objects with. From mid-April onwards in Nebraska this is actually quite dangerous because you might get bitten by a tick and get a very serious infection – Lyme disease.

As many PAC members know, my wife, Barbara, has been suffering from Lyme disease for almost 6 years now. She contracted it in California, probably from a tick brought into a house on a dog. Lyme disease, like syphilis, is caused by the spirochete bacterium. In the case of Lyme disease this is the spirochete *Borrelia burgdorferi*. However, ticks carry a wide range of infections and Barbara was also co-infected by *Babesia*, a protozoa that parasitize red blood cells and cause the malaria-like infection, babesiosis. Other infections that carried by ticks include Colorado Tick Fever, Ehrlichiosis, Relapsing Fever, Rocky Mountain Spotted Fever, Tick Paralysis, and Tularemia. That's a rather scary list of things you might contract while observing, isn't it?

We live out on an acreage and there are many ticks on and around our property. Sometimes they climb up people's legs while gardening, but mostly we find them on our cat, Tabby, who unfortunately brings them into the house. At the height of tick season we found 11 ticks on Tabby one day! (and those were just the ones big enough to readily see). Here are some sample pictures of ticks. The ticks are much smaller than shown in the picture.



The Lyme bacteria like to live in the fluid in joints and in the nervous system and brain. Thus Lyme disease causes joint problems (esp. in the knees and shoulders), and nervous system problems such as strange wandering numbness and partial paralysis. Nervous system problems and joint problems each have many other things that can cause them, but when both nervous system and joint problems occur together then Lyme disease is a likely cause. The Lyme disease specialist my wife sees says that the most common symptoms his new patients present with are those of fibromyalgia. Lyme disease symptoms mimic those of other diseases so Lyme disease is commonly misdiagnosed. It is reckoned that the average Lyme disease patient has about \$5000 of medical tests to rule out other causes before the Lyme disease is recognized.

About 60% of Lyme disease victims show a classic red circular bull's eye rash around the bite. This is referred to as erythema migrans. The rash may appear within a day of the bite or as late as a month later. This rash may start as a small, reddish bump about one-half inch in diameter. It may be slightly raised or flat. It soon expands outward, often leaving a clearing (normal flesh color) in the center. It can enlarge to the size of a thumb-print or cover a persons back. On dark-skinned people, this rash resembles a bruise.

The rash itself is a definitive diagnosis of Lyme disease and if you get such a rash around an insect bite see your doctor straight away since early anti-biotic treatment for about 6 weeks can cure Lyme disease at this early stage when it is only in the blood. Take a photo of the rash too for your medical records. As with many infections, the earlier Lyme disease is treated the better the chance of success. Lyme disease is much harder to treat once it has gone systemic and the bacteria are hiding in the joints and nervous system. Note that many (~ 40%) Lyme patients (including Barbara) never have the bull's eye rash.

Signs and symptoms of early local Lyme Disease often starts with flu-like feelings of headache, stiff neck, fever, muscle aches, and fatigue. So if after observing in the countryside you have any small bite and then get "flu like" symptoms a few days later then seeing your doctor is a good idea. Again, Lyme disease is much easier to treat earlier.

After observing, do a careful tick check. Look for ticks on your clothes and all over your body. Wearing light clothes helps locate ticks on you since the ticks are dark.

If you see a tick attached to you after observing, here is how the Lyme Foundation web site recommends removing it:

Tick's mouthparts have reverse harpoon-like barbs, designed to penetrate and attach to skin. Ticks secrete a cement-like substance that helps them adhere firmly to the host. If you find that you or your pet has been bitten by a tick, it is important to remove it properly.

1. Use fine-point tweezers to grasp the tick at the place of attachment, as close to the skin as possible.
2. Gently pull the tick straight out.
3. Place the tick in a small vial labeled with the victim's name, address and the date.
4. Wash your hands, disinfect the tweezers and bite site.
5. Mark your calendar with the victim's name, place of tick attachment on the body, and general health at the time.
6. Call your doctor to determine if treatment is warranted.
7. Watch the tick-bite site and your general health for signs or symptoms of a tick-borne illness. Make sure you mark any changes in your health status on your calendar.
8. If possible, have the tick identified/tested by a lab, your local health department, or veterinarian.

The Lyme Foundation also cautions:

- Children should be taught to seek adult help for tick removal.
- If you must remove the tick with your fingers, use a tissue or leaf to avoid contact with infected tick fluids.
- Do not prick, crush or burn the tick as it may release infected fluids or tissue.
- Do not try to smother the tick (e.g. petroleum jelly, nail polish) as the tick has enough oxygen to complete the feeding.

I estimate, just based on the number of people we know who have Lyme disease, that perhaps 2% of the population of Lincoln who are middle-aged or older have Lyme disease, and most of those people are unaware of it. To learn more about Lyme disease visit the Lyme Foundation at http://www.lyme.org/otherdis/ld_symptoms.html

As well as checking yourself after observing, some practical things you can do while observing are: 1) avoid observing in open fields. A gravel parking lot is safer. 2) if you are in a field, put a tarp down to lie on. 3) Avoid crouching or lying on the ground.

Tabby brought in her first tick on April 11 this year so Nebraska tick season is already underway. Last year Tabby stopped bringing in ticks after the end of July, but technically tick season lasts until the first hard frost in the fall.

NASA Marks 30th Anniversary of Viking Mission

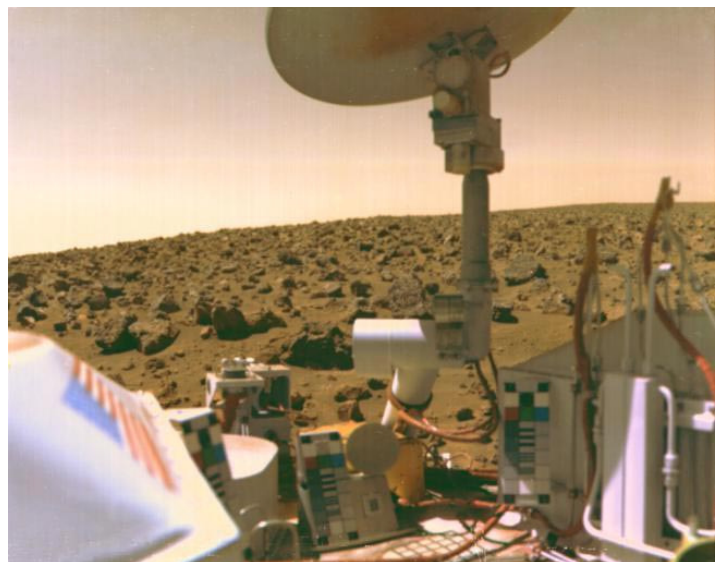
Thirty years after the first successful landing on Mars by NASA's Viking spacecraft, the ambitious mission continues to evoke pride and enthusiasm for future space exploration.

NASA's Viking 1 and 2 missions to Mars, each consisting of an orbiter and a lander, became the first space probes to obtain high resolution images of the Martian surface; characterize the structure and composition of the atmosphere and surface; and conduct on-the-spot biological tests for life on another planet.

Viking 1 was launched Aug. 20, 1975, and arrived at Mars on June 19, 1976. On July 20, 1976, the Viking 1 lander separated from the orbiter and touched down at Chryse Planitia. Viking 2 was launched Sept. 9, 1975, and entered Mars orbit Aug. 7, 1976. The Viking 2 lander touched down at Utopia Planitia on Sept. 3, 1976.

"The Viking team didn't know the Martian atmosphere very well, we had almost no idea about the terrain or the rocks, and yet we had the temerity to try to soft land on the surface," recalled Gentry Lee, Solar System Exploration chief engineer at NASA's Jet Propulsion Laboratory, Pasadena, Calif. Lee was the science analysis and mission planning director for the Viking mission. "We were both terrified and exhilarated. All of us exploded with joy and pride when we saw that we had indeed landed safely."

"The Viking mission looms like a legendary giant, an incredible success against which all present and future missions will be measured," said Doug McCuiston, Mars Exploration Program director at NASA Headquarters in Washington.



Originally designed to function for 90 days, the Viking spacecraft continued collecting data for more than six years. The landers accumulated 4,500 up-close images of the Martian surface. The accompanying orbiters provided more than 50,000 images, mapping 97 percent of the planet.

Viking provided the first measurements of the atmosphere and surface of Mars. These measurements are still being analyzed and interpreted. The data suggested early Mars was very different from the present day planet. Viking performed the first successful entry, descent and landing on Mars. Derivations of a Viking-style thermal protection system and parachute have been used on every U.S. Mars lander mission, including Mars Pathfinder and the Mars Exploration Rovers, Spirit and Opportunity.

NASA's Langley Research Center, Hampton, Va., managed the Viking Program. NASA's Jet Propulsion Laboratory, managed by the California Institute of Technology in Pasadena, Calif., built the orbiters, provided the deep space network and managed the science mission. NASA's Glenn Research Center, Cleveland, designed the Titan/Centaur launch vehicles that propelled the spacecraft on their journey. NASA's Kennedy Space Center, Fla., provided the launch facility for the program. Scientists from across NASA served on the Viking science teams.

Events Calendar

August 2006						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 	2 	3 	4 	5 
		Sun: 18:23 - 08:42	Sun: 18:24 - 08:41	Sun: 18:25 - 08:40	Sun: 18:26 - 08:39	Sun: 18:27 - 08:38 Hyde Observatory Open to the Public
6 	7 	8 	9 	10 	11 	12 
Sun: 18:28 - 08:36	Sun: 18:29 - 08:35	Sun: 18:30 - 08:34	Sun: 18:31 - 08:33	Sun: 18:32 - 08:31	Sun: 18:33 - 08:30	Sun: 18:34 - 08:29 Hyde Observatory Open to the Public
				Mercury close to Venus	Northern Iota Aquariids	
13 	14 	15 	16 	17 	18 	19 
Sun: 18:35 - 08:28	Sun: 18:36 - 08:26	Sun: 18:37 - 08:25	Sun: 18:38 - 08:23	Sun: 18:39 - 08:22	Sun: 18:40 - 08:21	Sun: 18:41 - 08:19 Hyde Observatory Open to the Public
Perseid Meteor Shower					Mahoney Star Party	
20 	21 	22 	23 	24 	25 	26 
Sun: 18:42 - 08:18	Sun: 18:43 - 08:16	Sun: 18:44 - 08:15	Sun: 18:45 - 08:13	Sun: 18:46 - 08:12	Sun: 18:47 - 08:10	Sun: 18:48 - 08:09 Venus close to Saturn; Hyde Observatory Open to the Public
Mercury close to Saturn		Moon close to Venus			Club Star Party	
27 	28 	29 	30 	31 		
Sun: 18:49 - 08:07	Sun: 18:49 - 08:06	Sun: 18:50 - 08:04	Sun: 18:51 - 08:02	Sun: 18:52 - 08:01		
Mercury close to Regulus		PAC Club Meeting		Moon close to Antares		

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**

PRESIDENT: Ron Veys
(402) 486-1449
RVeys@southeast.edu

VICE PRESIDENT: Mark Dahmke
(402) 475-3150
Mark.Dahmke@4w.com

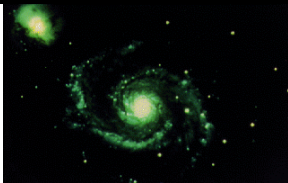
2nd VICE PRESIDENT Jack Dunn
(PROGRAM CHAIR): jdunn@spacelaser.com

SECRETARY: Bob Leavitt
(402) 488-5335
bob.leavitt@alltel.net

TREASURER: Lee Thomas
lleet@alltel.net

Club Observing Chair Jeff King
483-0599

Hyde Volunteer Coordinator: Dave Churilla
(402) 467-1514
weber2@inebraska.com



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

First Class Mail

**Next PAC Meeting
July 25, 2006
7:30 PM
Hyde Observatory**

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