

# The Prairie Astronomer

September, 2008

Volume 49, Issue #9

The Official Newsletter of the Prairie Astronomy Club

## PAC Program

Lee Thomas will talk about his trip to Russia to view the solar eclipse.

## In This Issue

Wachiska Audubon's Twilight on the Tallgrass At Spring Creek Prairie, Metis Asteroid Occultation, Focus on Observing, David [Brokofsky](#).

## Featured Photo

Another photo by Rick Johnson: "This is the Hickson group 68 found in the constellation of Canes Venatici. The group's galaxies have redshifts that put their distances at between 110 and 120 million light years. A nasty K5 star at magnitude 6.8 (too faint to see naked eye but still very bright compared to the rest of the stars) had to be dealt with. I sort of over killed it so it looks very artificial. The barred spiral in the group is NGC 5350. The rest are featureless elliptical galaxies. The two that overlap below 5350 are NGC 5354 (top) and NGC 5353 (bottom). The elliptical to their left is NGC 5355. Farther left and down is the highly elongated elliptical NGC 5358. To me the most interesting galaxy however is UGC 08841 in the lower left corner. At a distance of 118 million light years it appears to be a member of the group."

Please send your astrophotos to Mark Dahmke to be added to the PAC website and the newsletter.

Saturn image courtesy NASA.



# The Prairie Astronomer

## NEWSLETTER

### Focus on Observing Clubs--Jim Kvasnicka

#### Double Star Observing Club

This month we focus on the Double Star Observing Club. The Double Star Club will introduce you to 100 of the finest double and multiple stars in the sky. You don't need a large expensive telescope to observe the objects on the list. All 100 objects were originally observed with a three-inch refractor using 75X and 150X.

To qualify for the Double Star Club Certificate and pin you need to observe the 100 selected objects on the Double Star list. Your observing log should include the following information: the name of the object; date and time; an estimate of the seeing; the size and power of the telescope used; and a drawing of the double or multiple systems you observed.

Don't panic too much about making a drawing of what you observe. How difficult is it to draw a couple or more stars. All you need is a dot to represent a star with the size of the dot corresponding to the magnitude of the star. The distance between the dots represent the separation between the stars. You will also need to show North and either East or West on your drawings. Part of the exercise is to teach celestial directions so the position angles of the stars will be judged by the denotation of the directions.

It is recommended that the stars be found using star hopping and not by GO-TO methods, although it is not a requirement. Observing the stars with varying powers is also recommended. Some of the stars will require high magnification for separation. In some cases you will not be able to split the stars.

You may have noticed in my observing report in the club newsletter that I always list 8-9 double stars to observe. The double stars I list all belong to the Double Star list. If you observe the double stars I have listed each month you can complete the Double Star list in one year.

Submit a copy of your observations to me and I will forward (mail) your observations to the Double Star Observing Club chair for verification. Mike Benson the observing chair wants to see all observations.

If you have any questions regarding the Double Star Observing Club or need help getting started please ask me and I will be glad to assist you.

#### **List of PAC Double Star Observing Club Awardees**

Dave Brokofsky and Jim Kvasnicka

## Club Events

PAC Club Meeting  
Tuesday, September 30, 2008 7:30pm  
Hyde Obsv.

Club Star Party  
Friday, October 03, 2008

PAC Club Meeting  
Tuesday, October 28, 2008 7:30pm  
Hyde Obsv.

Next newsletter submission deadline: October 18th

Official Club Star Party Dates for 2008:  
Oct 31, Nov 28, Dec 26.

Alternate Dates:  
Oct 3, Oct 24, Nov 21, Dec 19.

### 2009 Star Party Dates

January 16th and **January 23rd**  
February 20th and **February 27th**  
March 20th and **March 27th**  
April 17th and **April 24th**  
May 15th and **May 22nd**  
June 12th and **June 19th**  
July 17th and **July 24th**  
August 14th and **August 21st**  
**September 18th** and September 25th  
**October 16th** and October 23rd  
**November 13th** and November 20th  
December 11th and **December 18th**

The date that is **bold and underlined** is the date closest to the New Moon.

## Club Telescopes - Checkout Policy

To check out one of the club telescopes, contact Cassie Etmund at [cggymnast1@aol.com](mailto:cggymnast1@aol.com). If you keep a scope for more than a week, please check in with Cassie 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.



## ON THE NET

PAC:  
[www.prairieastronomyclub.org](http://www.prairieastronomyclub.org)

PAC E-Mail:  
[info@prairieastronomyclub.org](mailto:info@prairieastronomyclub.org)

NSP:  
[www.nebraskastarparty.org](http://www.nebraskastarparty.org)

NSP E-Mail:  
[info@nebraskastarparty.org](mailto:info@nebraskastarparty.org)

OAS  
[www.OmahaAstro.com](http://www.OmahaAstro.com)

Hyde Observatory  
[www.hydeobservatory.info](http://www.hydeobservatory.info)

Panhandle Astronomy Club  
[Panhandleastronomyclub.com](http://Panhandleastronomyclub.com)

**PAC-LIST:** You may subscribe to the PAC listserv by sending an e-mail message to: [imailsrv@prairieastronomyclub.org](mailto:imailsrv@prairieastronomyclub.org). In the body of the message, write "Subscribe PAC-List your-email-address@your-domain.com"

For example:  
Subscribe pac-list  
[me@myISP.com](mailto:me@myISP.com)

To post messages to the list, send to the address

[pac-list@prairieastronomyclub.org](mailto:pac-list@prairieastronomyclub.org)

Buy club apparel through the club website. Shirts, hats, mugs, mouse pads and more.



# The Prairie Astronomer

## NEWSLETTER

### Club Business

Minutes for the August 26, 2008 PAC meeting

President Brian Sivill called the meeting to order 14 members, three guests.  
The next club meeting will be Tuesday Sept. 30 at Hyde.

The next club star parties are August 29, and Sept. 5 at the Busboom farm.

On Sept 13, the club will participate in the Waushiska Audobon society's "Twilight on the Tall Grass" at Spring Creek Prairie.

The next Mahoney Star Party is scheduled for Sept. 19 at Mahoney State Park.

Club Observing Chair, Jim Kvasnicka provided a preview of objects visible for September.

Club business:

Treasurer's report: 'It was all spent in Russia!'-Lee Thomas ;-)  
Actually, balances in club accounts are as follows:

|                  |             |
|------------------|-------------|
| Checking balance | \$2,570.19  |
| Savings balance  | \$9,302.45  |
| CD-1             | \$17,511.77 |
| CD-2             | \$ 3,876.26 |
| CD-3             | \$ 5,355.25 |
| Total            | \$38,615.92 |

Erik Hubl reported on the progress of the proposed lighting standards. The proposal passed the city planning commission unanimously. The issue goes to the Lincoln City Council for approval next.

Eugene Lanning gave us information on the occultation of 6th magnitude SAO 093320 by asteroid 9 Metis. Plans for club observations are underway.

Brian discussed recent proposals for more club activities in the future, such as a picnic, star parties for the moon, planets, etc. in addition to the usual new moon schedule, and trips to places like the Cosmosphere and other points of astronomical interest.

The meeting was adjourned to the program with Brian and Josh Machacek providing photos and commentary on NSP 15. Afterward, Those who remained were treated to a \*first light\* for Hyde's new Astro-Vid camera images of Jupiter and its moons.

Respectfully submitted by,

Lee Taylor

## Observing: What to View in September -- Jim Kvasnicka

This is a partial list of objects visible for the upcoming month.

### Meteor Showers

**Orionids:** Will peak before dawn on October 21<sup>st</sup>. Look for up to a dozen per hour.

### Planets

**Venus:** Low in the west-southwest. Magnitude -3.9, 13" wide.

**Saturn:** Look for Saturn in the hind feet of Leo just before dawn to start the month.

**Jupiter:** Moving toward the Teapot in Sagittarius. Magnitude -2.3, 39.7" wide.

**Uranus and Neptune:** In Aquarius and Capricornus. Finder maps are on page 63 in the September Sky and Telescope.

**Mercury:** Look for it just above the eastern horizon after October 6<sup>th</sup>.

**Mars:** Too low in the afterglow of sunset to be seen.

### October Messier List

**M24:** The Sagittarius Star Cloud.

**M25:** Open cluster in Sagittarius just east of M24.

**M18:** Small open cluster in Sagittarius north of M24.

**M17:** The Omega or Swan nebula in Sagittarius.

**M16:** The Eagle nebula. North of M17 in Serpens.

**M11:** The Wild Duck cluster in Scutum.

**M26:** Open cluster in Scutum.

**M55/M75:** Globular clusters in Sagittarius. M75 is one of the most concentrated GCs.

**Last Month:** M13, M14, M22, M28, M54, M69, M70, M92

**Next Month:** M27, M30, M56, M57, M71, M72, M73

### NGC Objects

**NGC 253:** The Silver Coin Galaxy in Sculptor. Very large with low surface brightness.

**NGC 288:** Globular cluster in Sculptor.

**NGC 663:** Open cluster in Cassiopeia.

**NGC 6905:** The Blue Flash Nebula. PN in Delphinus.

### Double Stars

**8 Lacerta:** Four white stars.

**Beta Cephei:** White and blue stars.

**Struve 2816:** White primary with two blue stars.

**Xi Cephei:** Yellow pair.

**Delta Cephei:** Yellow primary with a pale blue secondary star.

**Eta Persei:** Bright yellow star with a light blue secondary.

**Struve 331:** White primary with a blue-white secondary.

**Epsilon Pegasi:** Bright yellow and white stars.

### Challenge Object

**NGC 1499:** The California Nebula in Perseus. Very large and faint; use a wide FOV with an H-Beta filter.

## ANNUAL MEMBERSHIP DUES

**REGULAR MEMBER - \$30.00 per year. Includes club newsletter, and 1 vote at club meetings, plus all other standard club privileges.**

**FAMILY MEMBER - \$35.00 per year. Same as regular member except gets 2 votes at club meetings.**

**If you renew your membership prior to your annual renewal date, you will receive a 10% discount.**

**Club members are also eligible for special subscription discounts on Sky & Telescope**

## CLUB STAR PARTIES

**Club star parties are held monthly on the Friday night nearest the new moon. Since they are held on private land, they are for club members and invited guests only. If you'd like to attend a star party, please contact one of the club officers. Check the club website members-only area for directions to the site.**

# The Prairie Astronomer

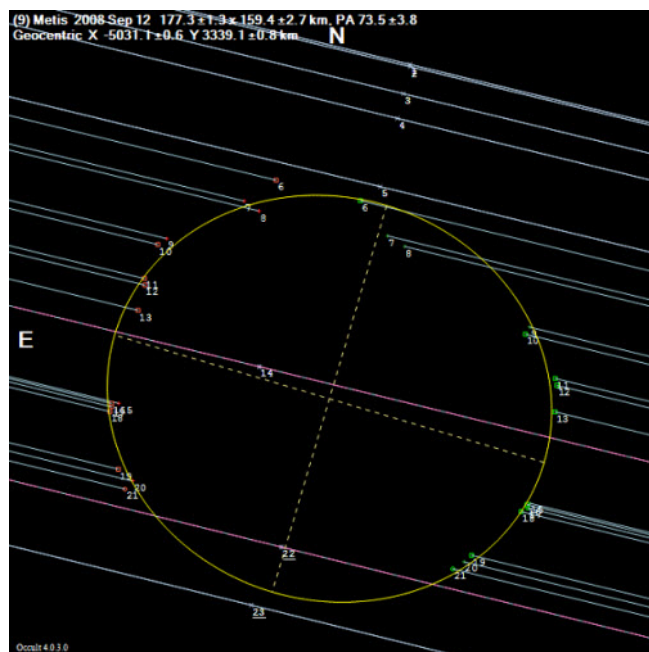
## NEWSLETTER

### The Metis Asteroid Occultation-- E. C. Lanning

Hey, you make a better door than a window! Sound familiar? Well just as when a person walks across in front of a TV, an asteroid can block the view of a star too. In astronomy circles we say an occultation (same root words as occult—hidden) has occurred. Around 1:26am on the morning of September 12<sup>th</sup> an asteroid named Metis passed in front of a star known only by its designator HIP 14764 (a.k.a. SAO 093320) in Ari, causing the star to dim by a factor of 42 (4 magnitudes). That period of dimming was to be timed by PAC observers at Hyde – but as is often the case clouds interfered with plans. So did we fail? No! We had many PAC members working together on the preparation, many members shared knowledge, PAC recognized that joining a larger team had value, and a real good spirit of learning about the mechanics of the event prevailed.

The team for the event was larger than even just PAC, it involved attempted observations at over 50 sites spread from California to near the Canadian border. Of those sites, some were too far north to see it, but their report did help to put a firm upper limit on the path and size of the asteroid. The below graphic shows the observers that have submitted reports. Each observer is identified with a number. I did add a line that represents what would have been observed from Hyde had the clouds not been present (Line #22), and it is now estimated that the occultation lasted for about 32 seconds in the Lincoln area. Line #23 is just outside of Nebraska City, where my observation site would have been a miss because it would have been too far south– I knew in advance that my location had about a 30% probability of not seeing an occultation at all.

PAC made really good plans for the event. As one person said, “Another day, another asteroid”.



**David James Brokofsky** passed away on September 13, 2008. He was born in Omaha, Nebraska on August 22, 1975. He was a graduate of Pius X High School and Bellevue University, and a former employee of BryanLGH Medical Center East. Dave Brokofsky was both a Hyde volunteer and a Hyde Supervisor.

Dave also worked for Martin Gaskell at the UNL Student Observatory as an observer taking data in his quasar research. He was active in so many areas of Astronomy. Dave received five different Astronomical League Observing Awards, more than any other individual PAC member. His love of Astronomy was always in the forefront of his life. His volunteer work with both Hyde and PAC, and his friendship, will be missed.

## Wachiska Audubon's Twilight on the Tallgrass At Spring Creek Prairie-- Dave Churilla

Every fall the Wachiska Audubon Society sponsors an event and fund raiser for Spring Creek Prairie southwest of Lincoln called Twilight on the Tallgrass. Prairie Astronomy Club volunteers have set up telescopes at the event for a number of years. According to Deb Hauswald, one of the organizers and PAC's contact, our involvement is a huge draw for them as people inquire if we are setting up our scopes.

The event started at 5 PM with stations on the Prairie Trails of different things involved with nature. We set up a booth near the building so that we could have a couple of telescopes set up for display. Thought was given to providing solar viewing, but the sun was void of any decent features to show the public. Dan Delzell, Jim Kvasnicka and Bob Kacvinsky joined me at 4:30 PM to set up and talk with people about astronomy. We really don't get much traffic at this part, but next year we should have some solar activity and maybe that can be our afternoon viewing.

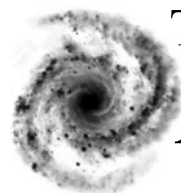
By 6:30 PM the rest of the volunteers had set up their scopes as well. We were joined by Dave Knisely, Cassie Etmund and Dan Kinchloe. The 7 of us lined our scopes up south of the Activity Building. Normally we would have most of them set up on the Prairie Trail for the Twilight walk (I've been keeping mine by the building for those who can't go on the walk and to entice "walk-in" traffic to pay for the Twilight walk), but with all the rain we had we couldn't chance damaging the prairie with the vehicles. However, with it being only 2 days from Full Moon, it really didn't matter much because it was really bright anyway. The Twilight walk featured 3 stations: PAC in the beginning with our scopes (we're usually the finale), the "Bat Lady" (a zoology professor from Doane College) and black lighting for bugs (with all the bugs flying around us THAT station could have been at my scope!!).

Of course, 7 of us bring out over \$10,000 worth of equipment and can't remember to bring a camera. But except maybe for Cassie that's no great loss...the rest of us look like we should be on wanted posters anyway!

The program started at around 7:30 on the stage, which was a presentation of readings written by Loren Eiseley, a highly respected anthropologist, science writer, ecologist and poet. The unfortunate thing was that as they started the readings the moon appeared and we had about half the crowd at the telescopes viewing it and Jupiter. But since most of them were families with kids who probably wouldn't sit still during the hour long readings anyway, that might have been a good thing. I haven't heard back from the organizers so don't have an exact count, but Dave K and I estimated around 300 people gathered for the better part of the evening around our telescopes and enjoyed the views we were giving them.

We were busy the entire night with crowds "oohing" and "awing" with every view in the telescopes. That's of course due to 2 things: the natural beauty of the objects we were looking at and the efforts of the PAC members there. I can't give enough praise to those volunteering that night (once again they were Dan Delzell, Dan Kinchloe, Cassie Etmund, Dave Knisely, Bob Kacvinsky, and Jim Kvasnicka). They were great, as usual not only for setting up their scopes and putting objects in them but for the information they were giving the gathered crowd. Over a dozen objects were put in the scopes including globular and open clusters, nebulae, Jupiter, the Moon, Neptune and Uranus.

The crowds are great at Spring Creek because most enjoy science (that's why they're here) and at least appreciate what you are showing them. Many hung around for a long time to take 2<sup>nd</sup> and 3<sup>rd</sup> looks at objects and to ask questions. They genuinely wanted to know things and that makes it really worth while and enjoyable to set up. The moon is easy to get "WOWS" out of, but when people are awed by looking at a little bluish dot that's Uranus or Neptune and say it may not be much to look at, but at least "we can say we saw it...it's cool!", that makes your night. And this night a lot of people made it worth while to be at the Twilight on the Tallgrass. I hope more PAC members can join us next year for a night on the Prairie.



# THE *Prairie* *Astronomy* *Club*

Amateur Astronomy --  
A Hobby as Big as the Universe

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 to the right. Newsletter comments and articles should be submitted to: **Mark Dahmke, PO Box 80266, Lincoln, NE 68501 or mark@dahmke.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.

|   |   |
|---|---|
| <b>PRESIDENT</b>                          | Brian Sivill<br>(402) 325-0997<br>nanoamps@windstream.net   |
| <b>VICE PRESIDENT</b>                     | Cassie Etmund   |
| <b>2nd VICE PRESIDENT (Program Chair)</b> | Jack Dunn<br>jdunn@spacelaser.com                           |
| <b>SECRETARY</b>                          | Oliver L. Taylor<br>(402) 327-0804<br>otaylor89@hotmail.com |
| <b>TREASURER</b>                          | Lee Thomas<br>lleet@alltel.net<br>(402) 483-5639            |
| <b>Club Observing Chair</b>               | Jim Kvasnicka<br>(402) 423-7390<br>jim.kvasnicka@pfizer.com |
| <b>Outreach Coordinator:</b>              | Dave Churilla, 467-1514<br>weber2@inebraska.com             |
| <b>Newsletter and Website Editor:</b>     | Mark Dahmke<br>(402) 475-3150                               |

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{MM:RENEWALDATE}

**Next PAC Meeting**  
**September 30, 2008**  
**7:30 PM**