

# The Prairie Astronomer

August, 2009

Volume 50, Issue #8

The Official Newsletter of the Prairie Astronomy Club

## PAC Program

Jack Dunn will talk about the plans for the Mid States Region Astronomical League Convention, which will be held in Lincoln June 4-6, 2010. The committee chairs will be identified and Jack will identify where we need help from volunteers. We want to put our best foot forward to the Astronomical community and our fellow amateurs from across the Mid-states, so please plan to attend this important meeting.

In addition to MSRAL planning we'll get an update on several NASA missions.

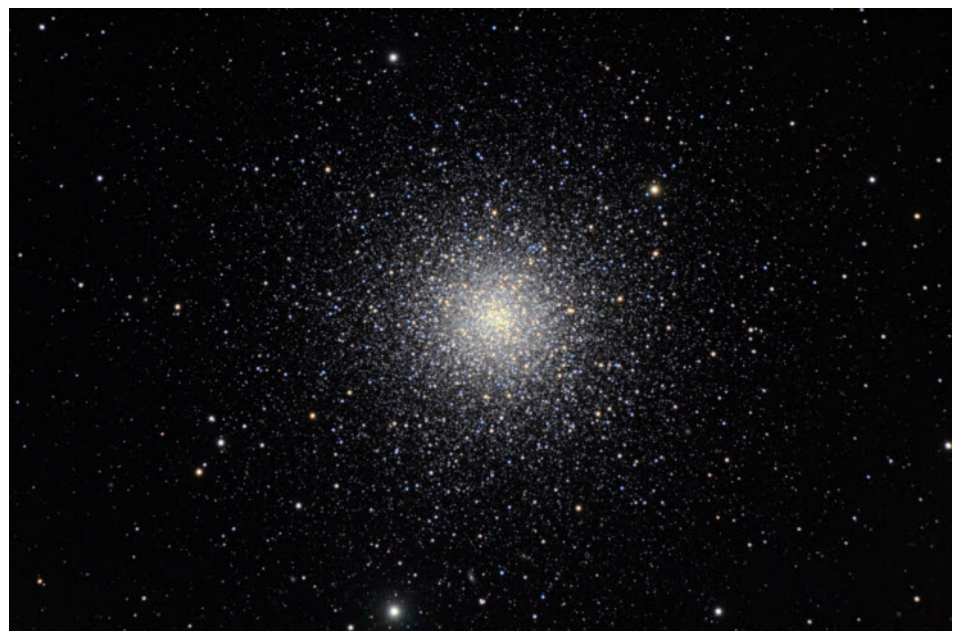
## In This Issue

Focus on Observing, Outreach Report, MSRAL, Observing Awards.

M3, by Rick Johnson. "M3 is a globular star cluster in Canes Venatici. It is considered one of the showpiece globular star clusters. At about 34 thousand light-years it is a rather distant one to be so famous. It contains a large number of variable (mostly RR Lyrae) stars. The cluster is quite blue due to the large number of "Blue Stragglers" that it contains. It is thought that most globular clusters formed at about the same time as our galaxy, 10 billion years ago, and that its stars all formed at that time. Yet these "Blue Stragglers" appear to be young stars as stars of their color would live very short lives compared to the 10 billion year age of the cluster. There are several explanations of how these come to be. One is the merger of two or more stars, another is one star stripping gas from another raising its mass enough to turn it blue, still another says the outer shell of a helium burning star has been stripped away exposing the super hot blue core. Maybe all are involved. With such closely packed stars it is very difficult to get a good spectrum of these stars which would help to understand this issue."

## Featured Photo

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



## Club Business --Meeting Minutes

President Brian Sivill Called the meeting to order, 25 members, 4 guests

Announcements:

The next PAC meeting will be Tuesday August 25, 7:30 PM at Hyde

The next PAC star parties are August 14 and 21, at The Farm.

There will also be a lunar party on Friday July 31 at Jim Kvasnicka's residence.

The Iowa Star party will be August 20-23 at the Whiterock Resort in Coon Rapids, Iowa

Observing Chair Report

Club Observing Chair, Jim Kvasnicka provided a review of recent star party activity and a preview of August's observing highlights, as well as a presentation of the constellation Sagittarius. Jim also presented two observing awards, this month. Congratulations to Dan Delzell for his completion of the Messier list and to Bob Kasvinsky for completing the AL's double star list. Congratulations, Dan and Bob. Also, Brian noted Jim's outstanding service to the membership in getting members their awards and encouraging members to complete their observing projects. Thanks, Jim.

Mark Dahmke discussed his appearance in the Lincoln Journal-Star 's article on observing the International Space Station.

Outreach report: PAC outreach coordinator, Dave Churilla provided a review of the public events held so far this year and gave notice of the next several events we have planned the rest of the year. Brian noted Dave's dedicated service to the club in his outreach efforts. Thank you for everything you do, Dave.

MRSAL reports: PAC program chair, Jack Dunn, who is also the chair for the 2010 MSRAL convention, has requested reports on this year's MSRAL, so he can provide the Mid-States region a review of the event. Jack also requested help in planning, organizing, and presenting the 2010 MSRAL here in Lincoln. A preliminary meeting of those who'd like to help will be held in August. For now, here is what we have:

Jack Dunn was elected the club chairperson at the 2009 Mid-State Convention

Ron Veys was elected co-chair

Lee Taylor and Lee Thomas have volunteered to help in any way needed.

If you'd like to help, contact Jack. He'll be setting up planning meetings, etc.

Brian reported that PAC's order for Galileoscopes has been received, but the "bill has not yet arrived", so to speak. We expect it in the next month or so. Several comments were made about the one Jack received, most notably the difficulty in initially constructing it. The idea of a scope construction party was discussed. Such an event will be planned, and hopefully occur before the end of the year.

Dave Silcox spoke about his recent trip to Philadelphia's Franklin Institute and the exhibit involving one of Galileo's original instruments.

Jim suggested that some improvements be made to the observing site his family has graciously provided us these past few years. He contacted a contractor who quoted around \$600.00 for laying some gravel in the driveway. The idea was well received. The club requested that he provide a written proposal for this, so we could vote on it in the near future.

NSP 16

Brian presented some of his photos and stories about the 16th annual Nebraska Star Party.

Adjourn to Mark Dahmke's program on viewing a space shuttle launch.

Respectfully submitted by,

Lee Taylor

### 7th Annual Iowa Star Party

Thursday, August 20, 2009 Whiterock Conservancy, near Co Thursday, August 20 Sunday, August 23, 2009 Guest speaker Dr. Elwynn Taylor\* presenting, Standing Between Us and the Stars: A Thin Layer of Air.

### PAC Club Meeting

Tuesday, August 25, 2009 7:30pm @ Hyde Obsv.

### Mahoney Star Party

Friday, September 11th

### PAC Club Meeting

Tuesday, September 29, 2009 7:30pm @ Hyde Obsv.

Next newsletter submission deadline: September 19.

### 2009 Star Party Dates

#### 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.



### 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

To post messages to the list, send to the address

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

PAC can also be found on Twitter and Facebook.

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



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

I wanted to get out early the date for the Wachiska Audubon Society's Spring Creek Prairie Twilight on the Tallgrass so you can mark it on your calendars. If any of you know now that you will be helping with this event please let me know. I will post another request a few weeks from the event so that we can finalize who's going to help out.

The event, for those who don't know, is a fund raiser for the prairie at Spring Creek. they set up trails with stations both day and night for people to see great things like bird banding, bats, etc. We are one of the featured stations at night, the one that people pay to go see. We are the finale of 3 stations for the night. This is a fun event so if you haven't done it please consider helping out. The more scopes the better as the past 2 years there have been more than 400 people at this event.

The event will be held on September 26th and our involvement will run from about 7 PM (when you need to come to set up) to 10 PM. Unfortunately that is a home night football game against Louisiana-Lafayette.

Let me know if you can make it...and thanks.

## From the Archives - August, 1979

A new comet, Bradfield 1979c, was discovered at 10th magnitude in Hydra on June 24 by William A. Bradfield at Dernancourt, Australia. Although fading, it is now circumpolar. The most recent magnitude estimate is by Donald E. Machholz: August 3.48, mag. 8.8, diameter 1.5' in his 10-inch.

The August issue of the PAC Newsletter also included Part 5 of Larry Stepp's tutorial on The Barlow Lens.

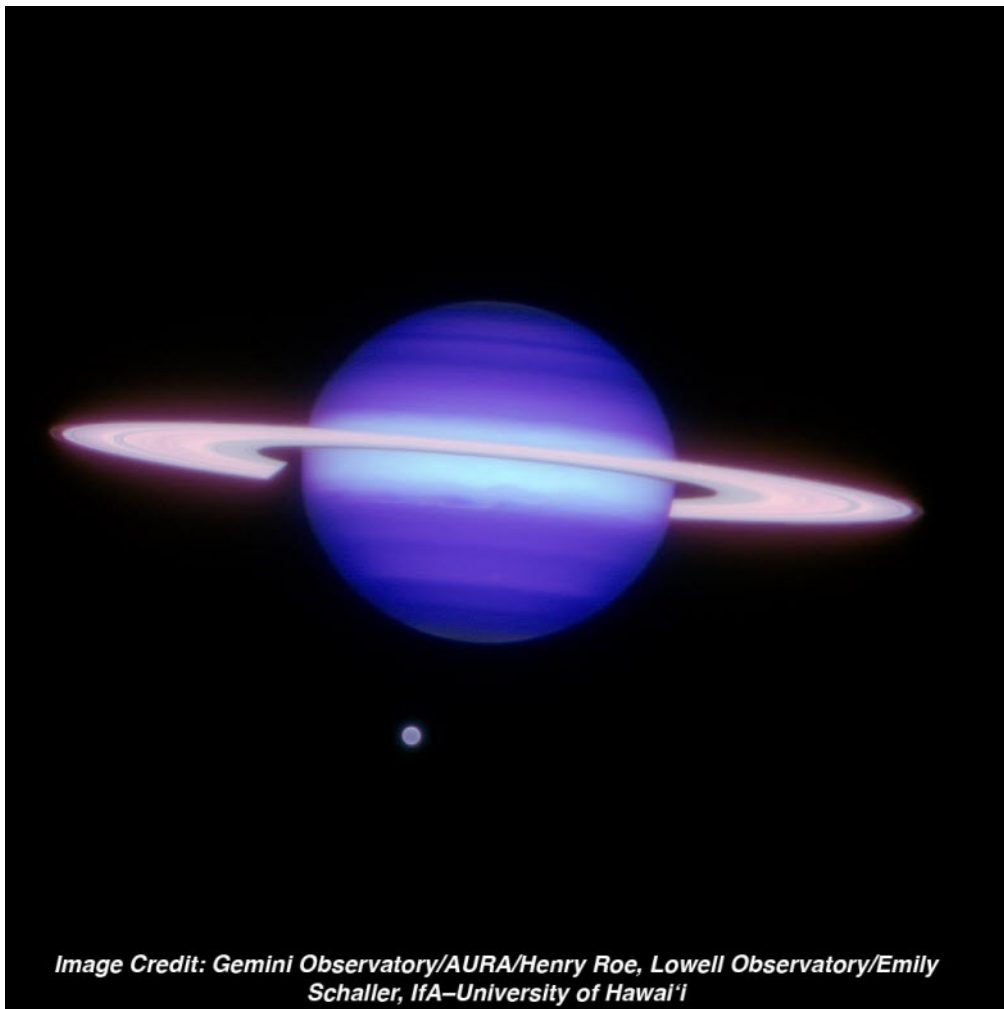
Program Chairman Rick Johnson will be demonstrating a computer program he has written that simulates the Perseid meteor shower. The meteor tracks are generated on a TV monitor which shows the radiant and constellations through which they pass.

August, 2009 Update: Rick's comments on his Perseid program:

“That was done on that computer in compiled BASIC if I recall, interpreter was way too slow. I think it was known as ZBASIC, no relation to Zenith's BASIC interpreter for their 8/16 bit computer a couple years later. It ran all meeting and every now and then a real biggie would flash across the screen. Whoever was talking would have their back to it and miss it, turning around just too late after hearing the oohs and aahs. It really was a realistic event. It worked off the pseudo random number generator. It just generated them as fast as it could. When one in the range that generated a meteor occurred then a starting location was picked as well as length and speed being set by more random numbers.

The radiant vector was calculated then it drew the meteor. It would generate about 60 an hour. It also generated 8 sporadic an hour using much the same system except direction was random as well. Just like the real shower there could be long periods when nothing happened followed by a flurry of meteors. Pairs were rather common. Constellations were crude being periods placed on the screen since it couldn't draw a dot.

But the major ones could be recognized. The one thing we'd noticed in showers at Earl [Moser]'s was that every once in a while a meteor appeared that was an “anti Perseid” It flew toward the radiant. I never programmed directly for this but during the meeting one sporadic did exactly that.”



*Image Credit: Gemini Observatory/AURA/Henry Roe, Lowell Observatory/Emily Schaller, IfA—University of Hawai'i*

## 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 Magazine.**

Gemini North infrared image of Saturn and Titan (at about 6 o'clock position). Image obtained on May 7, 2009 (5:31 UTC) using the Altair adaptive optics system with the Near-infrared imager (NIRI). At the perimeter of Saturn's ring the F-ring is faintly visible. The F-ring was discovered in images from the Pioneer 11 spacecraft in 1979 and is normally not apparent in images taken with ground-based telescopes. Also apparent are several of Saturn's smaller moons. This color composite image made using data from three infrared filters (K' [2.0-2.1 microns], h210 [2.12 micron narrowband], and bracket gamma[2.17 micron narrowband]), the field of view is about 40 arcseconds across. Note to photo editors: The full-resolution images are at the native pixel dimensions of the data and are not available at higher resolution without resampling. CREDIT: Gemini Observatory/AURA/Henry Roe, Lowell Observatory/Emily Schaller, Insitute for Astronomy, University of Hawai'i.

## Twitter and Facebook Links

PAC	<a href="http://twitter.com/PAC_Lincoln_Ne">http://twitter.com/PAC_Lincoln_Ne</a>
OAS	<a href="http://twitter.com/Omahaastro">http://twitter.com/Omahaastro</a>
IYA	<a href="http://twitter.com/astronomy2009">http://twitter.com/astronomy2009</a>
News from NASA	<a href="http://twitter.com/NASA">http://twitter.com/NASA</a>
NASA/Kennedy Space Center - Official PAO Tweets	<a href="http://twitter.com/NASAKennedy">http://twitter.com/NASAKennedy</a>
NASA/KSC on Facebook	<a href="http://www.facebook.com/NASAKennedy">http://www.facebook.com/NASAKennedy</a>
NASA JPL	<a href="http://twitter.com/NASAJPL">http://twitter.com/NASAJPL</a>
NASA Ares	<a href="http://twitter.com/NASA_Ares">http://twitter.com/NASA_Ares</a>
Asteroid Watch	<a href="http://twitter.com/AsteroidWatch">http://twitter.com/AsteroidWatch</a>
Hubble Space Telescope	<a href="http://twitter.com/HubblePAO">http://twitter.com/HubblePAO</a>

Also Astronomy and Sky and Telescope Magazines are both on Facebook.

# September Observing: What to View--Jim Kvasnicka

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

## Planets

**Venus:** Rises less than 3 hours before the sun. Shines brightly at -3.9.

**Mars:** Rises in the middle of the night but best seen at dawn in Gemini.

**Uranus:** Near the Circlet of Pisces at magnitude 5.7.

**Jupiter:** Shines bright at -2.7 and its disk is  $0.75^\circ$  wide. On September 2-3 from 23:43 – 1:29 CDT Jupiter will have no visible moons. This won't happen again until 2019.

**Neptune:** Follows Jupiter across the sky. The distance between them increases to  $6.5^\circ$ .

**Saturn and Mercury:** Both are difficult to see in the sunset glow. Both become visible in the dawn sky at the end of the month. Saturn's rings will be edge on to the Earth on September 4<sup>th</sup>. This won't happen again until 2025.

## September Messier List

**M13:** The Great Hercules Cluster.

**M14:** Globular cluster in Ophiuchus.

**M22:** Another great globular cluster in Sagittarius.

**M28:** Globular clusters in Sagittarius near M22.

**M92:** Globular cluster in Hercules often overlooked because of M13.

**M54/M69/M70:** A trio of GCs found along the bottom of the Tea Pot in Sagittarius.

**Last Month:** M6, M7, M8, M9, M10, M12, M20, M21, M23, M62, M107

**Next Month:** M11, M16, M17, M18, M24, M25, M26, M55, M75

## NGC and Other Deep Sky Objects

**NGC 6826:** The Blinking Planetary in Cygnus.

**NGC 6934:** Globular cluster in Delphinus.

**NGC 6940:** Rich open cluster in Vulpecula.

**NGC 6960/6992/6995:** The Veil Nebula in Cygnus. Use a nebula filter.

## Double Star Club List

**Otto Struve 525:** Yellow and blue stars in Lyra.

**Gamma Delphinus:** Yellow primary with a yellow-green secondary.

**Zeta Aquarii:** Yellow and white pair.

**94 Aquarii:** Yellow primary with a pale blue secondary.

**Alpha Capricornus:** Al Giedi, wide pair of yellow stars.

**Beta Capricornus:** Dabih, yellow and blue stars.

**36 Ophiuchi:** Equal pair of yellow-orange stars.

**Omicron Ophiuchi:** Yellow and light yellow stars.

**70 Ophiuchi:** Yellow and orange stars.

## Challenge Object

**IC 1318:** Complex of nebulosity around Gamma Cygni. Use a wide FOV with a filter.

## Focus On Constellations - Cygnus--Jim Kvasnicka

### Cygnus

Cygnus, the Swan, is also known as the Northern Cross. The Swan's head is marked by the double star Albireo, and its tail by Deneb. The Swan seems to be flying SW down the Milky Way toward Aquila, the Eagle. Cygnus covers 804 square degrees and contains the most visually beautiful part of the northern Milky Way. Cygnus contains a number of individual objects pleasing to look at. Albireo is one of the most beautiful double stars in the sky. The North America nebula and the Veil Nebula are often photographed. Cygnus contains a number of both planetary nebula and open clusters. The constellation Cygnus is best seen in September.

### Mythology

Cygnus was identified with the Swan into which Jupiter turned himself when he wished to seduce Leda, the wife of Tyndareus, King of Sparta. From this union was born Pollux and Helen of Troy. Castor was fathered by Tyndareus, and was therefore, unlike Pollux, was not immortal.

### Objects in Sagittarius Magnitude 12.0 and Brighter

<b>Galaxies:</b>	NGC6764, NGC7013
<b>Open Clusters:</b>	M29, M39, Cr419, Cr421, Cr428, IC1369, IC4996, NGC6811, NGC6819, NGC6834, NGC6866, NGC6871, NGC6883, NGC6910, NGC6996, NGC6997, NGC7031, NGC7039, NGC7044, NGC7062, NGC7063, NGC7067, NGC7082, NGC7086, NGC7128, Berk86, Base16, Biur2
<b>Globular Clusters:</b>	
<b>Planetary Nebulae:</b>	NGC6826, NGC7008, NGC7026, NGC7027, NGC7048 PK64+5.1
<b>Bright Nebulae:</b>	IC5070, NGC6888, NGC7000
<b>SNREM:</b>	NGC6960, NGC6992, NGC6995
<b>Dark Nebulae:</b>	B144, B145, B157, B164, B168, B343, B346, B347, B350, B352, B361, B362, B364, LDN889, LDN935
<b>Named Stars:</b>	Deneb (Alpha), Albireo (Beta), Sadr (Gamma), Gienah (Epsilon), Azelfafage (Pi 1), Ruchba (Omega 2)

### Number of Sagittarius Objects in Various Observing Clubs

<b>Messier Club:</b>	2 objects
<b>Double Star Club:</b>	3 objects
<b>Herschel 400 Club:</b>	10 objects
<b>Globular Cluster Club:</b>	0 objects
<b>Open Cluster Club:</b>	15 objects
<b>Planetary Nebula Club:</b>	13 objects
<b>Urban Club:</b>	4 objects

## Observing Awards--Jim Kvasnicka

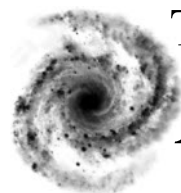
At the July PAC meeting two members received observing awards from the Astronomical League.

### Messier Observing Club

Dan Delzell

### Double Star Observing Club

Bob Kacvinsky



# 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 (402) 325-0997 nanoamps@windstream.net
<b>VICE PRESIDENT</b>	Cassie Etmund
<b>2nd VICE PRESIDENT (Program Chair)</b>	Jack Dunn jdunn@spacelaser.com
<b>SECRETARY</b>	Oliver L. Taylor (402) 327-0804 otaylor89@hotmail.com
<b>TREASURER</b>	Dan Delzell Dand@fes.org (402) 483-4585
<b>Club Observing Chair</b>	Jim Kvasnicka (402) 423-7390 jim.kvasnicka@pfizer.com
<b>Outreach Coordinator:</b>	Dave Churilla, 467-1514 weber2@inebraska.com
<b>Newsletter and Website Editor:</b>	Mark Dahmke (402) 475-3150

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**Next PAC Meeting**  
**TUESDAY**  
**August 25, 2009**  
**7:30 PM**  
**Hyde Observatory**