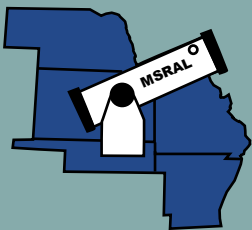


# The Prairie Astronomer

The Official Newsletter of the Prairie Astronomy Club

## IN THIS ISSUE:

MSRAL 2013 Report  
What to View in June  
Globular Clusters  
Star Party Report  
Zach Thompson



## May Program

Dave Knisely: Solar Observing in H-Alpha

## Featured Photo

NGC 206 is a large star cloud in M31 much like the much smaller M24 in our galaxy. Photo by Rick Johnson. [\[Link to full size image\]](#)



**Night Sky Network**

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, P. O. Box 5585, Lincoln, NE 68505** or [mark@dahmke.com](mailto: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.



## Meeting Minutes

Minutes from the April PAC meeting, submitted by Ben Rush.

Discussed MSRAL occurring May 19th and 20th  
Bob Kacvinsky gave the Treasurer's Report.

Mentioned Astronomy day was a success.

Discussed changes in the direction of the newsletter.

Made a motion and passed the motion to reassign new people to the management of the newsletter. Lee Taylor, Mark Dahmke and Jack Dunn are going to work together to pick up the newsletter.

Jim Kvasnicka gave the observing report. He believes he will be giving up the position as the observing chair soon as well.

Alexandra Toftul and Matt Heflin discussed their latest work with the American Institute of Aeronautics and Astronautics.

## May 10 Star Party Report—Bob Kacvinsky

Attendance: Rick Brown, Mike Kearns, Bill Lohrberg, Jason Noelle, John Reinert, Jim Kvasnicka, and Bob Kacvinsky

Rick met Jason in Cortland and arrived about 8:45 while Mike, Jim, and Bob were setting up. The sun finally went down by at 8:35 but twilight lasted for another 45 minutes. Jason was able to find the thin crescent moon just a day after new moon. The thin crescent was just visible in the horizon haze and thin clouds.

The Clear Sky Clock gave good seeing and average transparency due to the high humidity. We were collecting dew on all of our equipment from the time the sun went down till we closed up a little past midnight. Yet, with a little management we had very good viewing for over two hours.

Jim and I were working on our Herschel observing club. Jim was working on a few NGC objects he had to get in Leo and I was working on several in the western skies including a few Gemini objects. This was the first full light for my new 16" Lightbridge. I am still working to resolve a floating mirror and getting the focus just right. The lower power eyepieces were giving me an echo image at times, but the 9 Nagler proved to be the

best eyepiece for the evening. The highlight of the night was viewing the Eskimo planetary and being able to see the central star and a hint of the oval checks on one side. Also took a break and enjoyed Hercules Cluster and could really distinguish the dimmer background stars well with their deeper reds and greens.

Jason and Rick were enjoying touring several of the Messier objects and helping Rick with his scope. Several objects brought out the oh's and ah's including the Hercules Cluster, M81-82, Whirlpool, and a number of other familiar objects.

Jupiter was into the horizon "soup" rather quickly but Saturn offered a nice view of the rings and even showed 2-4 bands across the disk and a nice ring shadow line. It was interesting that all of the observable moons for both Jupiter and Saturn happen to be all on the same side of the planets. Interesting oddity.

Overall the Star Party was a great success and we sure hope that the first timers felt that they had a good night of viewing. We all are looking forward to the next opportunity to get out and really enjoy the night sky.

## ANNUAL MEMBERSHIP

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.

STUDENT MEMBER - \$10.00 per year with volunteer requirement.

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.

## Club Telescopes

To check out one of the club telescopes, contact Ben Rush. If you keep a scope for more than a week, please check in 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.

100mm Orion refractor:  
Available

10 inch Meade Dobsonian:  
Available

13 inch Truss Dobsonian:  
Available

## 2013 PAC Star Party Dates

Dates in bold are closest to the new moon

January: 4, **11**  
February: 1, **8**  
March: 1, **8**  
April: 5, **12**  
May 3, **10**  
June: May 31, **June 7**  
July: June 28, **July 5**  
**NSP August 4-9**  
August: 2, **9**  
September: Aug 30, **Sept 6**  
October: Sept 27, **Oct 4**  
November: Oct 25, **Nov 1**  
December: Nov 29, **Dec 6** and 27

### PAC E-Mail:

[info@prairieastronomyclub.org](mailto:info@prairieastronomyclub.org)

### PAC-LIST:

To subscribe send a request to PAC. To post messages to the list, send to the address:

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

## Events

PAC Meeting  
Tuesday May 28th, 2013  
@Hyde Observatory

PAC Meeting  
Tuesday June 25th, 2013  
@Hyde Observatory

PAC Meeting  
Tuesday July 30th, 2013  
@Hyde Observatory

Nebraska Star Party  
August 4-9

PAC Meeting  
Tuesday August 27th,  
2013 @Hyde  
Observatory

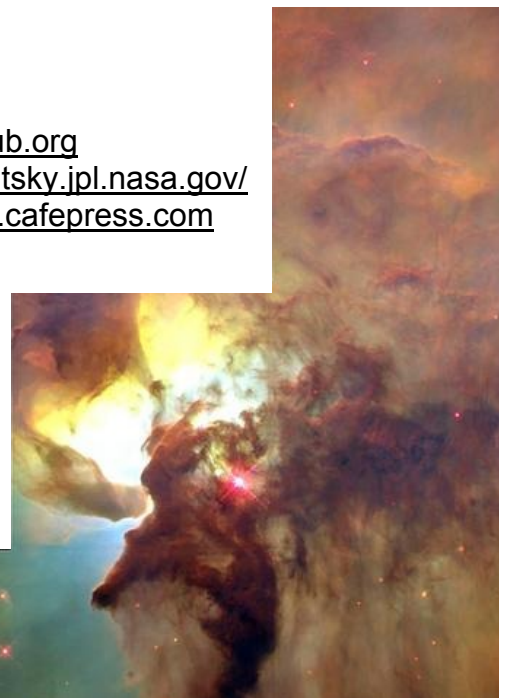
Newsletter submission deadline  
June 15, 2013

## Links

PAC: [www.prairieastronomyclub.org](http://www.prairieastronomyclub.org)  
Night Sky Network: <https://nightsky.jpl.nasa.gov/>  
CafePress (club apparel) [www.cafepress.com](http://www.cafepress.com)

[www.hydeobservatory.info](http://www.hydeobservatory.info)  
[www.nebraskastarparty.org](http://www.nebraskastarparty.org)  
[www.OmahaAstro.com](http://www.OmahaAstro.com)  
[Panhandleastronomyclub.com](http://Panhandleastronomyclub.com)  
[www.universetoday.com/](http://www.universetoday.com/)  
[www.planetary.org/home/](http://www.planetary.org/home/)  
<http://www.darksky.org/>

Giant "Twisters" and Star  
Wisps in the Lagoon Nebula.  
Credit: A. Caulet (ST-ECF,  
ESA) and NASA



## June Observing: What to View—Jim Kvasnicka

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

### Planets

**Venus:** Low in the WNW at magnitude -3.8 all month.

**Mercury:** Unusually high at magnitude -0.4 to start June. Look for Mercury to the upper left of Venus.

**Jupiter:** Becomes invisible on June 4<sup>th</sup>. It reaches conjunction on June 19<sup>th</sup>.

**Saturn:** Saturn fades in June from 0.3 to 0.5 magnitude. It shrinks a bit in size but the rings remain a beautiful sight.

**Uranus/Neptune:** In Pisces and Aquarius at dawn.

**Mars:** Rises about a ½ hour before the Sun in the east. By the end of June it's higher and easier to view.

### Messier List (Virgo Galaxy Cluster)

**M58:** Oval shaped with a bright core.

**M59/M60:** Both fit in the same FOV.

**M84/M86:** Both fit in the same FOV, the start of Markarian's Chain.

**M87:** A round fuzzy ball with a bright core.

**M88:** A small oval shaped patch.

**M89/M90:** Both fit in the same FOV.

**M91:** A faint oval hazy patch.

**M98:** Long pencil like shape.

**M99:** A bright round fuzzy patch.

**M100:** A round hazy glow of light.

**Last Month:** M49, M51, M61, M63, M64, M85, M94, M101, M102, M104

**Next Month:** M3, M4, M53, M68, M80, M83

### NGC and Other Deep Sky Objects

**NGC 4559:** Elongated galaxy in Coma Berenices.

**NGC 4565:** Large edge on galaxy in Coma Berenices.

**NGC 4725:** Oval shaped galaxy in Coma Berenices.

### Double Star Program List

**Sigma Corona Borealis:** Equal bright yellow stars.

**16/17 Draconis:** Equal pair of white stars.

**Mu Draconis:** Pair of close white stars.

**Kappa Herculis:** Yellow pair.

**Alpha Herculis:** Orange primary with a greenish secondary.

**Delta Herculis:** Bright white primary with a blue-purple secondary.

**Rho Herculis:** Close white pair.

**95 Herculis:** Equally bright yellow and white stars.

**Alpha Librae:** Wide pair of yellow and white stars.

### Challenge Object

**NGC 5053:** Class XI globular cluster in Coma Berenices 1° SW of M53. NGC 5053 is a Class XI globular cluster and M53 a Class V. Notice the difference in concentration.

Donald Carlo  
(Tiny) Gasparetti

December 4,  
1949 - May 5,  
2013



Don (Tiny) Gasparetti age 63 of Kingston, TN passed away Sunday May 5, 2013 at his home. He was a former member of the Prairie Astronomy Club and was a Past Master Lancaster Lodge No. 54 AF & AM, a Shriner where he was active in the clown and motor car corp, Tabula Rosa and the Scottish Rite. Member of Bethel Presbyterian Church and the Oak Ridge and Gettysview Country Club.

# Globular Clusters—Jim Kvasnicka

Globular clusters to me are the most impressive deep sky objects to observe. They contain hundreds of thousands of stars in spheres that are over 100 light years in diameter. A globular star cluster's density is usually higher in its core and decreases as you move towards the outer edge. Because of their distance they do require moderate aperture to best observe them and resolve any stars.

The degree of concentration towards the center of a globular cluster is expressed in its Shapley-Sawyer concentration class from I – XII. Class I globular clusters have the most concentrated cores and class XII have the lowest concentration. Some Class XI and XII globulars such as M71 in Sagitta are hardly richer than the most populous open clusters. Most people think that globulars are similar in appearance but individual globulars are visually distinctive from one another. Each globular cluster has its own individual characteristics and should be carefully observed for structural peculiarities. The only thing they have in common are a large number of stars.

Our Milky Way contains some 150 plus globular clusters. They are distributed in a sphere a couple hundred light years in radius from the Galactic center but they increase in number dramatically the closer you get to the Galactic center. As expected the constellations close to the Galactic center, Sagittarius, Scorpius, and Ophiuchus are rich in globular clusters.

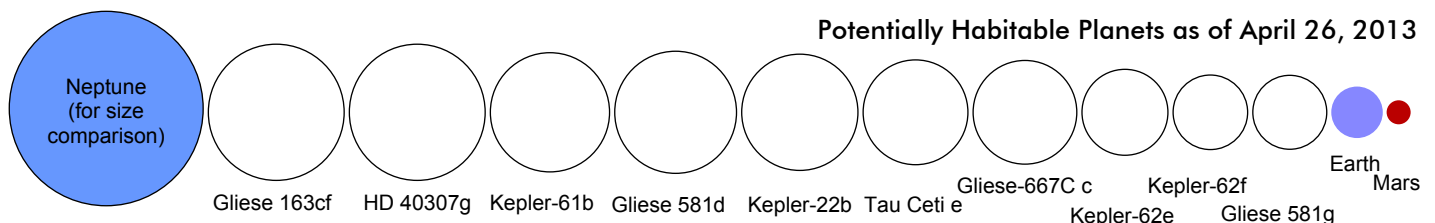
Even the nearest globular cluster, M4 in Scorpius, is not less than 6,500 light years away from us. Hence they are not good small telescope objects.

Some of our best northern sky globular clusters such as M13 in Hercules, M3 in Canes Venatici, and M5 in Serpens require 8 inch telescopes to begin to look like the showpiece objects they are, with scores of stars resolved.

The middle classification globular clusters are probably the best to observe. The globular clusters in the Class I-III range are difficult to resolve due to their concentration. Classes X-XII are hardly better than glorified open clusters.

If you are interested in observing globular clusters the Astronomical League does offer a Globular Cluster Program you can participate in. It requires observation of 50 globular clusters including one of their challenge globular clusters. To do the program does require that you purchase a guide from the Astronomical League. You can obtain more information at the Astronomical League website if you are interested or you can talk with me regarding the Globular Cluster Program. Myself and four other club members have completed the Globular Cluster Program. I can't speak for the other members but I greatly enjoyed doing the Globular Cluster Program and it has been my favorite program that I've completed from the Astronomical League.

Summer is coming soon and it's the best time to observe globular clusters. Good luck in your observations.



## How I Became Interested in Astronomy—Zach Thompson

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Hello, fellow stargazers! As a newly-joined member of the Prairie Astronomy Club, I thought I should introduce you all to myself. My name is Zach Thompson and astronomy is a love I've had since I was a child. Many of you can probably remember the first time you became transfixed with the wonders and mysteries of the cosmos. For me, it was just an unassuming moment in my life that started me on the path of exploration of our universe.

I was perhaps eight or nine years old when my dream of going to Walt Disney World finally came true! After years of anticipation and hope, I was certain this would amount to nothing less than becoming the defining moment of my life... ever. Before actually getting to Walt Disney World, the vacation package included a three day cruise to the Bahamas aboard a vessel called the Big Red Boat. And it was just that: a big, red boat! Interesting side note, in a Disney vacation pack, this boat was Looney Tunes themed. Talk about the best of both worlds!

About midway into the cruise, on a fantastically clear evening (and after gorging myself on all the ice cream I could eat from the vendor on the pool deck), I stood with my father on the sun deck of the ship. For no particular reason I glanced up at the sky. Something grabbed my attention. There were three stars that appeared perfectly lined up with each other. My father noticed that I had stopped talking (for once) and followed my gaze upwards. "That's Orion's Belt", he said. I asked what he meant and he proceeded to explain that it belonged to a constellation called Orion the Hunter. I followed his finger as he pointed out the rest of this strange pattern that, until now, I had never noticed before. Was this the only "constellation" in the sky? Why does it look the way it does? And what, for that matter, is a constellation anyway?

The waves slammed against the sides of the ship. And the waves of curiosity seemed to drive through a dam in my mind. The world, no the universe, became real for me. Those three stars in Orion's Belt weren't just points of white against black. They were stars that live and die, far away from me, yet I could see them perfectly, in this

pattern from here on Earth. I had to learn more. My place on this planet, in this universe, was changed that night. There are more things in heaven and earth, young Zach, than are seen on Nickelodeon.

I'll spare you the details of my Walt Disney World adventure, but when I got back home from that trip I had to see the stars again.

Growing up on an acreage gave me a great advantage for observing the night sky. There was still the light pollution from Lincoln, but not enough to obscure what I went out to find: Orion. And there he was; the magnificent hunter rising in the sky with his club raised overhead, ready to face anything head on. When I see Orion, I see myself: the young boy on a mission to ask the toughest questions about the universe and hunt for answers. From Orion, I went on a quest to discover the other patterns in the sky, all of them beautiful and majestic; each with stories and secrets of their own.

That's how I fell in love with astronomy. What's your story?



Kevin Dowd, Dave Knisely, Dave Hamilton at MSRAL 2013

## MSRAL 2013 Report—Jack Dunn

While much of the country was welcoming a new Star Trek movie to the theaters, a group of amateur astronomers were thinking of the stars in the real world. About 75 amateurs from the Mid-States Region of the Astronomical League gathered at Mahoney State Park near Ashland, NE.

Hosted by the Omaha Astronomical Society, the meeting took place Friday and Saturday May 17<sup>th</sup> and 18<sup>th</sup>. Mahoney proved a very fine setting for the meeting with its scenic views of the Platte River. From ways for amateurs to observe extra-solar planets to collecting meteorites, MSRAL attendees saw a variety of presentations. Friday night's Star-B-Que was held among the planes in the Strategic Air and Space Museum. The evening's speaker was Dr. Bharat Ratra of Kansas State University. Dr. Ratra spoke in Lincoln sponsored by PAC a few months ago and he again tantalized the minds of listeners with the amazing field of cosmology. Saturday evening's banquet speaker was longtime amateur Richard Harshaw. Harshaw is currently part of the Saguaro Astronomy Club, but for many years was

a member of the Astronomical Society of Kansas City. There was plenty of camaraderie and fine food. Amazingly enough there were even cookies left after the enjoyable weekend. Next year's MSRAL convention will be hosted by the St. Louis Astronomical Society, June 6-8, 2014.



Photo by Jeff Huston

Congratulations to John Johnson of OAS for being awarded this year's Mid States region "Amateur of the Year" award.



Photo by Jeff Huston

## MSRAL 2013 Photos—Mark Dahmke



Bill Bond, OAS President



An abundant supply of brownies at the star-b-que

Star-b-que at the Strategic Air and Space Museum





# MSRAL 2013 Photos—Mark Dahmke



MSRAL business meeting. On behalf of the PAC officers, Jack Dunn gave a report on PAC at the business meeting.



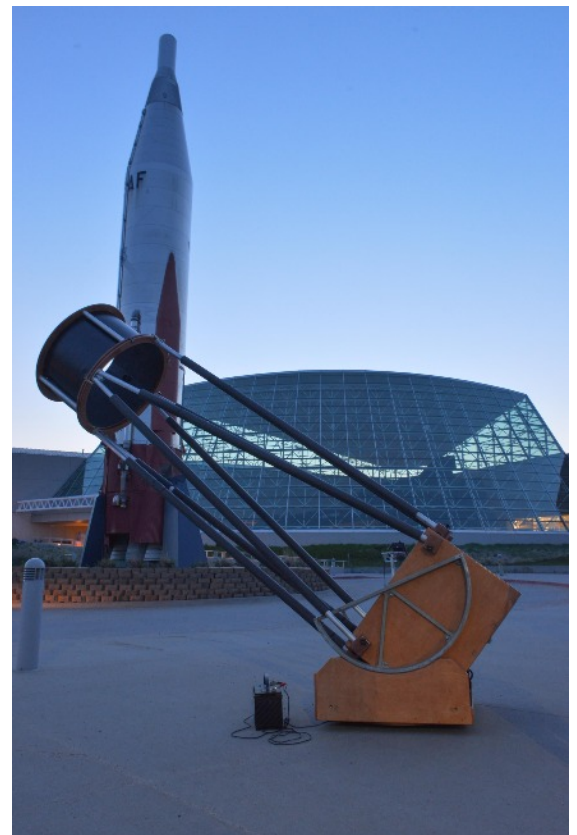
Michael Sibbersen



Richard Harshaw



After the Star-b-que, Dr. Bharat Ratra gave a presentation on dark matter, dark energy, and the accelerating universe.



## MSRAL 2013 Photos—Jack Dunn



Lunch at Mahoney Lodge



Bill Bond



SASM Mobile Observatory

Bharat Speaks



# Membership Roster

As required in the bylaws, the membership roster is to be published on an annual basis.

Last	First	Middle	Mailing Address 1	Mailing City	Mailing State	Mailing Zip	Paid Through
ATKINS	JIM		3028 SOUTH 35TH STREET	LINCOLN	NE	68506-3218	2013-03-01
Barry	Richard and Lola		6320 Lexington Ave.	Lincoln	NE	68505	2013-11-01
Basset	Gilles		5921 Bartholomew Circle	Lincoln	NE	68512	2013-03-01
Baughman	Dean		1421 North 11th St.	Beatrice	Ne	68310	2013-02-01
Bazan	Dale		2021 NW 53rd St.	Lincoln	NE	68528	2013-02-01
BERGSTROM	LIZ		6611 VINE ST	LINCOLN	NE	68505-2234	2012-11-01
Boller	Brett		1647 County Road D	Dorchester	Ne	68343	2013-04-01
Brown	Rick		3040 N. 74th Street	Lincoln	NE	68507	2013-07-01
Churilla	Dave		1501 No 76th St.	Lincoln	NE	68505	2013-05-01
Churilla	Joey						
Clarke	Linda and Hugh		3721 Diablo Dr	Lincoln	NE	68516-4803	2013-01-01
Dahmke	Mark		625 Pier 1	LINCOLN	NE	68528	2013-07-01
Delzell	Dan		1601 Buckingham Drive	Lincoln	Ne	68506-	2013-07-01
Dietsch	Ben		1420 W Lake Street	Lincoln	NE	68512	2013-03-01
DOWD	KEVIN		3727 SOUTH 78TH STREET	LINCOLN	NE	68506	2012-11-01
Dunn	Jack		1340 F ST	LINCOLN	NE	68508	2013-05-01
Engel	Mike		238 Piazza Ter	Lincoln	NE	68510-2058	2013-07-01
Fentress	Bethany		1715 Garfield Street	Beatrice	NE	68310	2013-02-01
Filipi	Nathan		1640 N 56th St. Apt. 2	Lincoln	NE	68504	2013-02-01
FRANEY	HARLAN		5523 S 73RD ST	LINCOLN	NE	68516-4318	2013-12-01
Gainsforth	Kris		8225 Karl Ridge Rd #613	Lincoln	NE	68506	2012-08-01
Gard	Doug		6100 Thorton Drive Apt 912	Lincoln	NE	68512	2012-12-01
Gould	Bill		1010 Manchester Ln.	Lincoln	NE	68528	2013-01-01
Handeland	Jim		8100 Brookfield Drive	Lincoln	NE	68506-7311	2013-09-01
Hartman	Karen		7021 S. 38th Street Apt 46	Lincoln	NE	68516	2013-02-01
Hile	Caleb		5521 S 77th St	Lincoln	NE	68506	2012-07-01
Johnson	Rick and Holly		21700 Jack Pine Lane	Nevis	MN	56467	
Kacvinsky	Bob		2915 TENNYSON STREET	LINCOLN	NE	68516-	2013-03-01
Kearns	Mike		9800 South 56th St	Lincoln	NE	68516	2013-12-01
KINCHELOE	DANIEL		4441 PAGODA LANE	LINCOLN	NE	68516-4439	2013-02-01
KNISELY	DAVID		1616 N 14TH ST	BEATRICE	NE	68310-1626	2013-11-01
Kvasnicka	Jim		6300 REBEL DRIVE	LINCOLN	NE	68516-	2013-05-01
LAMMERS	JOHN		1007 8TH STREET	FAIRBURY	NE	68352-2431	2013-11-01
LANNING	EUGENE		130 HILLSIDE TERRACE	NEBRASKA CITY	NE	68410	2013-11-01
Leavitt	Bob		1500 CRESTLINE DR	LINCOLN	NE	68506	2013-11-01
Lionberger	Ruth		3405 W Sprague Road	Martell	NE	68404	2012-10-01
Lloyd	Steve						
LOHRBERG	BILL		4520 Meadow Lane	LINCOLN	NE	68506	2013-10-01
MANTHEY	ROBERT		6855 SOUTH ST	LINCOLN	NE	68506	2013-09-01
Michel	Doug		811 W Harvest Dr	Lincoln	NE	68521-3840	2013-12-01
Moore	Ryan		6020 Meridan Dr. Apt 32	Lincoln	NE	68504	2013-10-01
MOSER	EARL		P O BOX 162	HICKMAN	NE	68372-0162	2099-09-01
Noelle	Jason		1025 N 63rd Street	Lincoln	NE	68505	2013-03-01

## Membership Roster—continued

Paul	Mallory		7219 York Ln	Lincoln	Ne	68505-	
Pearson	Chris and Bryce		1102 N 44th Street	Lincoln	NE	68503	2013-05-01
Pribil	Robert		5001	Lincoln	NE	68504	2013-07-01
REINERT	JOHN	W	PO BOX 83251	LINCOLN	NE	68501-	2013-11-01
Romano	AJ		4431 Newton Circle	Lincoln	NE	68506	2013-05-01
Rush	Ben		5741 Normal Blvd	LINCOLN	NE	68506	2013-03-01
Schnirl	Scott		2515 Woodsdale Blvd	Lincoln	NE	68502	2012-10-01
Schultz	Peter						2099-01-01
Sivill	Brian		7206 WALKER AVE	LINCOLN	NE	68507	2013-09-01
Stepp	Larry						2099-01-01
Taylor	Oliver	L	4907 LOWELL AVE	LINCOLN	NE	68506-	2012-09-01
Thomas	L	Lee	5827 LASALLE ST	LINCOLN	NE	1454	2013-12-01
Thompson	Zach		5940 Brookview Dr.	Lincoln	NE	68506	
TOLLY	CHAD	W.	4830 ST. PAUL AVE.	LINCOLN	NE	68504-	2013-08-01
Ullman	Kristin and Eric		3400 Casa Grande Lane	Lincoln	NE	68516	2013-09-01
Veys	Ron		3320 WILLOW WOOD CIR	LINCOLN	NE	68506-	2013-11-01
Wally	Denise		3130 N. 112th Street	Lincoln	NE	68527	2013-01-01
Wassung	J Kent		5561 Colby Street	Lincoln	NE	68504	2013-06-01



Amateur Astronomy —  
A Hobby as Big as the  
Universe

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FIRST CLASS MAIL

**Next PAC Meeting**  
**TUESDAY**  
**May 28, 2013**  
**7:30 PM**  
**Hyde Observatory**