

The Prairie Astronomer

The Official Newsletter of the Prairie Astronomy Club



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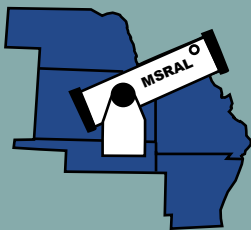
What to View in September
NGC Objects
Nebraska Star Party

August Program

Nebraska Star Party Report and Photos

Featured Photo

By Brett Boller: 5 Minute shot of the Sagittarius arm of the Milky Way. Taken at NSP, Merritt Reservoir.



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, 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

Jason Noelle called meeting to order at 7:30 PM Tuesday July 30, 2013.

Last meeting was the annual BBQ and social. No business meeting was held in June.

Next meeting is August 27th with Nebraska Star Party (NSP) recap and slideshow.

Reminded August 4-9 Nebraska Star Party at Snake River Campground and Merritt Reservoir.

Bob Kacvinsky presented treasurer's report. Audit was completed. Reminded about keeping up to date on dues. Paid dues for insurance and astronomical league.

Outreach opportunity September 7, 2013 at Wildwood Historic House in Nebraska City. Dan Delzell was point person. Asked to 3-4 volunteer telescopes. Suggested contacting Eugene Lanning. OAS may be attending. Will send out a PAC list email with information.

No official other business. Some informal conversation about Nebraska Star Party prizes.

Observing report was presented by Jim Kvasnicka. 3 dates in June. June 28 (9 attended), July 5 (1 attendee), July 12 (6 attended). Next star parties August 2 and August 9, concurrent with Nebraska Star Party. Presented Messier List and evening and morning objects. Perseids will peak August 11-13. Detailed some Astronomical League observing programs available to members.

Jason suggested an informal club meeting occur at NSP.

Business meeting portion concluded at 7:46 PM.

Program following the meeting was Emily Moravec presenting on undergraduate research experiences in astronomy at Maria Mitchell Association in Massachusetts.

NSP Photos—John Reinert



Left: A lighter moment shared at the PAC Club campsite

Below: Bookended while waiting for the Sunday evening meal.

Zach Thompson interviewing Tom Miller.

Photos by John Reinert



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

PAC-LIST:

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

pac-list@prairieastronomyclub.org

Events

PAC Meeting
Tuesday August 27th,
2013 @Hyde
Observatory

PAC Meeting
Tuesday Sept 24th, 2013
@Hyde Observatory
(Nominations for Club
Officers)

PAC Meeting
Tuesday Oct 29th, 2013
@Hyde Observatory
(Election)

PAC Meeting
Tuesday Nov 26th, 2013
@Hyde Observatory

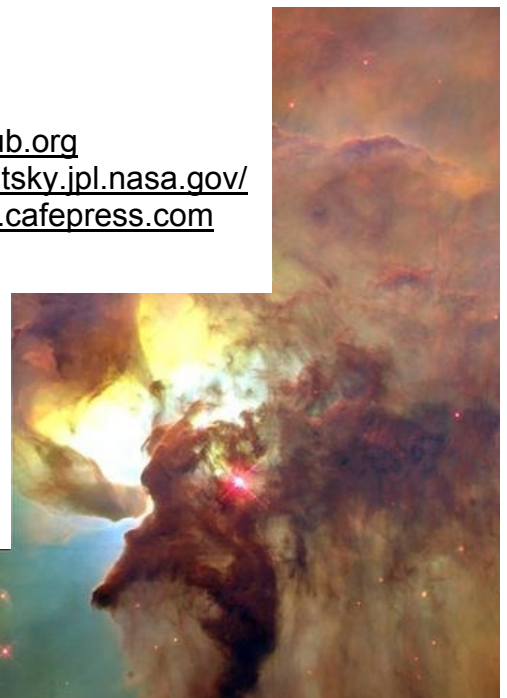
Newsletter submission deadline
September 15, 2013

Links

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

www.hydeobservatory.info
www.nebraskastarparty.org
www.OmahaAstro.com
Panhandleastronomyclub.com
www.universetoday.com/
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



September Observing: What to View—Jim Kvasnicka

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

Planets

Venus: Low in the WSW at magnitude -4.0 to -4.2 during September.

Mercury: To the lower right of Venus, difficult to see.

Saturn: Starts the month 18° to the upper left of Venus. The gap closes between them and on the evenings of September 18th and 19th Saturn is 3½° above the brighter Venus.

Jupiter: Rises sooner and is high by the start of dawn. Jupiter increases in brightness from a -2.0 to -2.2.

Mars: Rises around 3 am all month. Mars will have two conjunctions in September. On September 8th and 9th it passes through M44. The second conjunction is with Comet ISON at the end of September providing the comet is bright enough.

Uranus/Neptune: In Pisces and Aquarius.

Messier List

M13: The Great Hercules Cluster, Class V globular cluster.

M14: Class VIII globular cluster in Ophiuchus.

M22: Class VII globular cluster in Sagittarius.

M28: Class IV globular cluster in Sagittarius.

M54/M69/M70: Class III, V, and V globular clusters along the bottom of Sagittarius.

M92: Class IV globular cluster in Hercules.

Last Month: M6, M7, M8, M9, M10, M12, M19, 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 6905: The Blue Flash Nebula, planetary nebula in Delphinus.

NGC 6934: Globular cluster in Delphinus.

NGC 6960: The Veil Nebula western segment in Cygnus, use an OIII filter.

NGC 6974/6979: The Veil Nebula central segment in Cygnus, use an OIII filter.

NGC 6992/6995: The Veil Nebula eastern segment in Cygnus, use an OIII filter.

NGC 7026: Bluish-green planetary nebula in Cygnus.

Double Star Program List

Otto Struve 525: Yellow and blue stars.

Gamma Delphinus: Yellow and yellow-green pair.

Zeta Aquarii: Yellow primary with a white secondary.

94 Aquarii: Yellow and pale blue pair.

Alpha Capricornus: Wide pair of yellow stars.

Beta Capricornus: Yellow primary with a blue secondary.

36 Ophiuchi: Equal yellow-orange stars.

Omicron Ophiuchi: Yellow and light yellow pair.

70 Ophiuchi: Yellow and orange stars.

Challenge Object

Palomar 12: Class XII globular cluster in Capricornus. Visible in an 8" – 10" telescope in good seeing conditions. It appears as a faint, small, unresolved haze.

NGC Objects—Jim Kvasnicka

The Veil Nebula

NGC 6960, NGC 6974, NGC 6979, NGC 6992, NGC 6995

The Veil Nebula was discovered by William Herschel in 1784 with his 18 inch refractor telescope. The Veil Nebula is located in the constellation Cygnus and is 2,600 light years away. The Veil Nebula is part of the Cygnus Loop, the remnants of a supernova explosion

estimated to have occurred 30 to 40 thousand years ago.

The Veil Nebula is large, six times the diameter of the full Moon. It has a listed size of 230' x 160', almost 4° wide. Because it is so large separate parts were given their own NGC number.

NGC 6960

Western Segment of the Veil Nebula.

NGC Objects, continued

The bright star you see is 52 Cygnus.

NGC 6974/6979

Central Segment of the Veil Nebula.
The Central Segment contains Pickering's Triangle which does not have a NGC number.

NGC 6992/6995

Eastern Segment of the Veil Nebula.

Because the Veil Nebula is so large you need to use a low power eyepiece to observe it. An OIII filter is a must when observing the Veil Nebula. You may be able to see it without an OIII filter but the OIII makes a real difference.

Nebraska Star Party—Clay Anderson

As a native Nebraskan, I am extremely proud of the state where I was born and raised. I am especially proud of her people; hard working, benevolent and kind, with strong moral values that permeate their outgoing personalities. As an astronaut, many of my pilot colleagues liked to joke about Nebraska being the epitome of "fly-over country," that part of our great nation that bores those crossing in automobiles or speeding through her skies at 35,000 feet!

Well, after my first trip to Valentine, Nebraska, to participate in the annual (and this time, 20th anniversary) Nebraska Star Party last week, I am here to tell you all, that Nebraska is one gorgeous place!

Our ability to view the heavens during my short time there was not palatable. Too many (needed) rain showers and the accompanying cloud cover, limited viewing opportunities to timeframes hovering around 3 a.m., not good when you have to get up and do public speaking the next morning!

But the people clearly illustrated why my pride in Nebraska is so well-founded. From Omaha to Scottsbluff; from Valentine to Red Cloud, I don't believe you can find a better representation of true Americans than those that inhabit the Cornhusker State. Her natural beauty was also on display as I got my first look at the Snake River Falls and the Merritt Reservoir, not to mention the Black-eyed Susan laced rolling Sand Hills through which our 5.5 hour drive (from Lincoln) was predominantly executed.

To my dear friends Jack, Cassie, Zach and Mark... and all of the great folks at the Cherry County Visitor Promotion Board and the Nebraska Star Party who carried this off, I want to say thank you for the opportunity to be a part of this grand event.

As Jack likes to say, "Keep looking up!" And, oh, by the way... Go Big Red!



Clay Anderson with the Cherry County Visitor Promotion Board and President of the Valentine Chamber of Commerce.

NSP Photos



Left: Tom Miller and Louis Dorland. Above: Zach Thompson. Below left: Clay Anderson and friends.

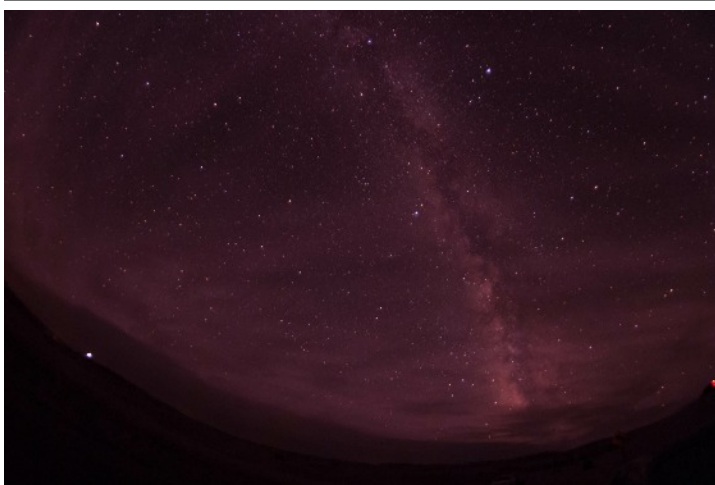


Far left: Pizza Hut catered lunch at the High School on Wednesday.

Michael Sibbersen brought the inflatable Space Shuttle from the Strategic Air and Space Museum.

All photos on this page are by Jack Dunn.

NSP Photos, continued



Above: 8mm full spectrum fisheye view of the Milky Way. Right: M31, cropped 50mm guided 60 second exposure. Below: a series of 25 second exposures of the ISS pass, 8mm lens, stitched together with PTGui. Photos by Mark Dahmke.



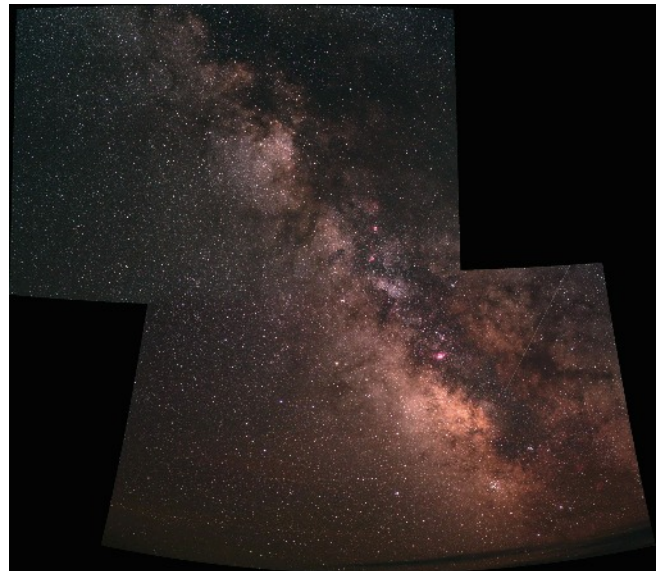
Left: Tom Miller and Mark Dahmke. Right: Zach Thompson interviewing Clayton Anderson for KOLN/KGIN. Photos by Jack Dunn.



NSP Photos, continued



Left: star trails over Dob row, M31, Veil Nebula. Photos by Brett Boller.



Above: Central Milky Way. Photo by John Johnson.



Reminder:

At the September PAC meeting we will have nominations for club officers. Election of officers will occur at the October meeting.

Please consider running for office. PAC needs you!

My First Nebraska Star Party—Mike Kearns

Well it is Saturday August 3, 2013 and my anticipation is high for what should be an unbelievable experience. When I first signed up for NSP, I asked my wife Linda if she would like to go, and to my delight she said sure! At that point, we decided to make this our vacation.

We arrived at the Snake River Campground around 3:00 p.m. Saturday afternoon with our popup camper in tow. We setup our camper by Bob Kacvinsky and Brian Sivill with a beautiful view of the lake and good view of the sky. Oh by the way (BTW), we left Lincoln before Bob and he was already at the camp site and half way setup when we arrived. I am still trying to figure that one out! Maybe it's because instead of going north from Mullen, I went west. At any rate, we made it.

After getting setup and settled in, we decided to go for a walk. While walking around, I commented to Linda about how many people were already there. Most were setup on the observing fields and had all different types of scopes. Everyone was very friendly and easy to talk too. The thing about this event is that we all have the same thing in common "Astronomy" so it's easy to strike up a conversation with anyone you happen to run into.

Later in the afternoon, Bob and I took off in our vehicles for what the PAC/NSP veterans call "Pac Hill". This hill is one of the highest on the observing field and is where several PAC members set up. Once up there we pulled out several tarps and started staking out our claims on Pac Hill. Then Bob pulled out his trusty little spade and started clearing these wicked little cactus' about an 1 ½ " diameter and thorns to rival a hypodermic needle. Pets and flip flops I wouldn't recommend on the observing fields. Just wear some good shoes, long pants and you'll be fine.

As evening started to near, it appeared that it may be too overcast to setup on Pac Hill, so we just decided to stay back at camp for the evening. Several of the PAC members came over to our campsite and we all just sat around shooting the breeze. After dark set in the skies started to clear so several of us setup our scopes at our camp



site. It was unbelievable the amount of stars you could see out there. You can actually make out the Andromeda galaxy and the Double Cluster without optical aid. The skies almost look cloudy because there are so many stars. The Milky Way, at the NSP, is something you have to see to believe. People, who have been there before, said the seeing was ok but it gets a lot better. As the nights went on, I found they were right, although that night; it had more stars than I've ever seen before besides "The Farm", which is also very good.

The next evening, after a tasty (optional) meal of barbecued chicken at the NSP tent, which I highly recommend, we drove our vehicles up to "Pac Hill" to set up. On that first night (Sunday) I think there were about 6 or 7 of us on the hill, and I was excited to say the least as dark started to approach. Due to an approaching storm we were forced to break down and walk back to the campground. By the way, we only received some winds (50-60mph) from that storm. When set up on "Pac Hill" we broke our scopes down after a nights viewing, locked them in our vehicles and walked back to camp without any white lights so we don't disturb the other observers on the observing field. It's a very short walk to camp and gave us a chance to stop by "Dob Row" and talk

My First Star Party, continued

to people and look through some larger scopes. It feels kind of strange out there you're first night because its pitch black with nothing but billions of stars over your head and a few red lights scattered about. Every once in awhile you'll hear some voices and a meteor or Iridium flare will streak across the dark sky bringing the place to life. Then it quiets back down and it's back to observing.

On Monday night we had some really good viewing with about 8 or 9 of the PAC members on the hill. My Z10 produced some stunning views, as both Linda and I were in awe of the skies. Bob had his 16" Lightbridge telescope which had very impressive views, to say the least. The details you can see through a 16" is something you have experience firsthand. We had 10X50 binoculars, which got a lot of use by my wife Linda. The views through those are breathtaking also.

Tuesday evening was the best night of all. At the NSP tent they served free hamburgers and with side dishes. Also we were all treated with the presence of Astronaut Clay Anderson, who just mingled about with the rest of us, talking to different people and shaking hands. I told Linda, how many people can say they had supper with 250 astronomers and Clay Anderson. Before we knew it, the time had arrived to head to the hill and setup. It started out cloudy, but weatherman Bob said it was supposed to clear by 10. He wasn't far off, in the meantime we had a good time playing with our lasers and talking. Then it cleared, and I looked up and thought to myself, is it still hazy or is that stars. I grabbed my 10X50s

and my jaw about dropped. It was stars I was seeing. Jim and Bob told me on a good night, it's hard to make out the constellations because there are so many stars. They were right again. Linda hung in there, bless her heart, until about 1 am and headed back to camp. The rest of us stayed up and observed and before we knew it, 3:00 a.m. had arrived. The thing about Merritt is you get so wrapped up in what you are looking at in the heavens you lose all track of time. The members on Pac Hill Tuesday night were as follows: Bill Lohrberg, Dan Delzell, Jim Kvasnicka, Dave Hamilton, Dale Bazan, Bob Kacvinsky, John Reinert (with camera), Mark Dahmke (with camera), Lee Thomas, Mike and Linda Kearns.

Wednesday morning arrived, we ate breakfast and drank coffee. The seeing wasn't looking to promising for the remainder of the day, so Linda and I decided to head down to Lake McConaughy to finish out our vacation. I know Linda now understands what we all see in this hobby. She said she really enjoyed herself and commented about the interesting people we met.

Linda and I thank all the PAC members and the attendees of NSP 2013 for making us feel so welcome. We had a fantastic time and now will be sure to make this an annual event. For any of you who have not attended an NSP, I strongly urge you to attend one. The skies are awesome out there.

Proud members of the PAC

Mike & Linda Kearns



NSP 20 - A Space Odyssey—Jack Dunn

It was the 20th Nebraska Star Party in the Sandhills of Nebraska. The clouds rolled in and clear skies weren't as plentiful as some would like. But it was a great time anyway.

I was very happy to see NSP founder Tom Miller and Dave Hamilton and old-timers at NSP. Tom and Louis Dorland (representing OAS) did some reminiscing at the cookout Telling stories about the founding of NSP by PAC and OAS. One person I have known for about 30 years showed up. Norm Sperling, who has written for "Sky and Telescope" and has been to NSP in the past, e-mailed me to say he was coming. He brought a large selection from his business in rare books and publications, which is called "Everything in the Universe."

This year the attendance was up to 236 who found their way to Valentine and Merritt Reservoir. The spike in numbers was due in no small part to the participation of Nebraska astronaut Clay Anderson who was our keynote speaker. Clay has 33,000 Twitter followers and in the days before and during NSP he was promoting the star party via his account. This gave us some great exposure before and during the event. had much more coverage in the press across the state than ever before. Television stations KOLN/KGIN (Lincoln/Grand Island), KNOP (North Platte) and NTV Network (Kearney) did reports from NSP. Lincoln Journal writer Al Laukitis brought his family and wrote it up for the newspaper. The Valentine/Ainsworth newspapers did an article featuring Clay and NSP. And Nebraskaland.com's "Outdoor Nebraska" did a fine feature on a family visiting the event "Panhandle Passages: Lessons From Star Party Country." I should mention Zach Thompson not only works part-time for me at the Planetarium, but for this trip he was also representing KOLN/KGIN as a reporter. His story on NSP filed from Valentine, played on the 4 p.m. news on Thursday as well as clips on the other newscasts. It also played in full on the program "Pure Nebraska." I have a copy we can show at the PAC meeting and Tom Miller was part of the report

Clay picked up a rental car in Omaha and several



of us rode out to Valentine with him on Tuesday. Myself, Cassie Etmund and Zach Thompson were in the "car party" We spent close to 700 miles with the "real Clay" (not just the astronaut guy) and came away impressed even more by his dedication and pride in his family. When I first met Clay's son he was a little kid playing in Houston. Today he is 6 ft. 4in and about 264 lbs. As of now he has 15 full-ride football scholarship offers from universities around the US. Clay's wife Susan still works at Johnson Space Center. And Clay's daughter is a middle-schooler really interested in acting. His family is central in his life. And if he weren't retired, he wouldn't want to give up the huge amount of family time that would be required if he were to fly again. So he is a retired astronaut. But there are still things to do and challenges ahead. There are no set jobs lined up right now, but he and the family would like to come back to Nebraska. Meanwhile, he has finished the manuscript of his book: "Taking Up Space." Not sure when you will see it published, but he's looking for arrangements on that.

When we got to Valentine, we dropped our things at the motel and headed out to Merritt. It was time for the cookout and this time Clay was just another NSP attendee. (even though people noticed him and crowded around anyway). Over the years I can tell you that if Clay is wearing his blue flight suit, he is a marked man. Apparently we didn't stay late enough as there were reports of the skies clearing After 11:30 or so. But we had a long big day ahead on Wednesday, so probably good we got some rest.

NSP 20 - A Space Odyssey, continued

Wednesday morning in the motel we were together with Clay making tweaks to his power point. He had been having problems with certain movies not playing correctly within the power point and there were other chances as well. Finally it was time to get to the High School. While Clay had lunch I was working making sure the speakers were set for the afternoon. Clay also spoke to the children's group run by Nina Baker. It was fun to watch the kids ask questions.

Bruce and Virginia Muses were up first in the auditorium, reflecting on their participation in the McDonald Observatory outreach programs. McDonald has an extensive setup apparently very well-funded for outreach.

Second, I ran the video I created featuring Emily Moravec at an undergraduate research workshop at the Maria Mitchell Observatory in Massachusetts. Turns out Jordan Bledsoe of Papillion, NE was also at the workshop and at NSP with her family. So Jordan gave a talk on her research into galaxy collisions and was there to answer questions. This is her third year at NSP and she is an impressive speaker representing the research side of Astronomy.

Clay followed as our final speaker. With a rousing standing ovation, the participants celebrated his descriptions of 38 hours of spacewalks and a total of 167 days in space.

The Valentine community leadership has always supported NSP and this year they sponsored a public talk by Clay in the evening following the speaker's afternoon session. The skies stayed cloudy unfortunately, but it was still a good

evening. Next day there was an NSP board meeting at the Prairie Club on highway 97 between Valentine and Merritt. While I went to the meeting, Clay and company visited Snake River Falls. After lunch we headed out across the plains flying down a one-lane ranch road. Headed back to Lincoln with many memories of NSP 20.

Video news reports:

<http://www.1011now.com/home/headlines/The-Darkest-Skies-in-the-Country-218689371.html>

http://www.knopnews2.com/index.php?option=com_k2&view=item&id=8461%3Astar-of-the-star-party&Itemid=105

<http://www.nebraska.tv/category/106914/one-tank-trips>

Click on "Nebraska Star Party."

Print articles:

http://journalstar.com/news/state-and-regional/nebraska/gazer-gathering-draws-nebraska-s-nasa-star/article_387b571f-70cd-5952-a102-cc8d7aa961fc.html

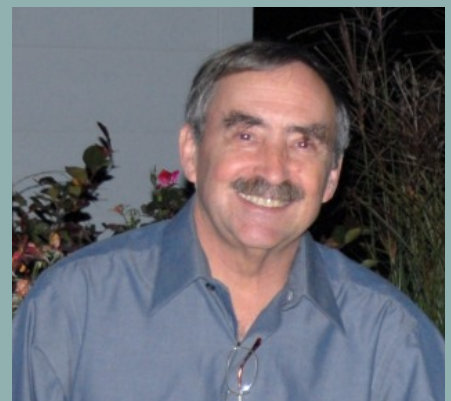
Outdoornebraska.ne.gov/blogs/2013/08/panhandle-passages-lessons-star-party-country/

PAC Members in the News

PAC's own Pete Schultz was interviewed for a story in Wired Magazine. Pete was a founding member of PAC (and still is a member). He is a professor in the Dept of Geological Sciences at Brown University in the Planetary Geosciences Group.

Here's a link to the story:

[NASA Brings Out the Big Gun for Asteroid Impact Science](#)





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A Hobby as Big as the
Universe**

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FIRST CLASS MAIL

**Next PAC Meeting
TUESDAY
August 27, 2013
7:30 PM
Hyde Observatory**