

# President's Report

by Dave Scherping



If you have access to Internet, see the  
Prairie Astronomy Club web page:  
<http://infoanalytic.com/pac/>  
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Omaha Astronomical Society web page:  
<http://www.top.net/cdcheney>

# The Prairie Astronomer

## NEBRASKA STAR PARTY

Plans and preparations are being finalized as we enter the last couple of weeks before NSP. At the time of this printing, all of the NSP meetings will have been held and all but the final details completed. To date, there are about 100 registrations, totaling almost 300 people and it's still not too late to register.

Jack Dunn has done a great job lining up a list of exciting speakers. Rick Pirko of Youngstown, Ohio will be the main speaker. He will share his experiences in working with the Russian space program. Brenda Culbertson will be speaking on a topic related to archeoastronomy. Dave Knisley will give a presentation on solar observing, and Winston Wermer will talk on astrospectroscopy. We're also glad to have Shawn & Joel from the Nebraska Math & Science Initiatives.

Mark Dahmke was the winner of this year's T-shirt design contest. I'm sure everyone is going to rave about the NSP shirts. The winners of the NSP photo contest were Tom Gehringer of Omaha and Danny Zumbun of Amarillo. Tom's photograph of the Milky Way was used in Mark's T-shirt design. Congratulations to all three.

I want to personally thank all of those who volunteered their time and energy to ensure this year's Nebraska Star Party will be the best ever.

## GREAT PLAINS STAR PARTY

For those who couldn't make it to NSP or just can't get enough "star partying", there's another great event coming up and it's not too far away. The Great Plains Star Party is scheduled for September 12-15, 1996 at Scopeville, Kansas which is 75 miles southwest of Kansas City. The event is sponsored by the Kansas Astrophotographers and Observers Society (KAOS). I'll have registration brochures at the PAC meeting, or for more information, contact Dan Johnson at (913) 897-0235.

## OBSERVING WITH THE OAS...

Those of us who attended the June 12th NSP meeting also enjoyed observing with the Omaha Astronomical Society at their observing site following the meeting. There was a great turnout, with about 10 scopes and 15-20 people. The skies were clear with

*(Continued next column)*

## JULY/AUGUST MEETING NOTICES:

NSP MEETING  
THURSDAY, JULY 25th, 7:30 p.m.  
at Mahoney State Park Lodge

GENERAL MEETING  
TUESDAY, JULY 30th, 7:30 p.m.  
at Hyde Memorial Observatory

3RD ANNUAL NEBRASKA STAR PARTY  
AUGUST 11th-17th  
at MERRITT RESERVOIR

GENERAL MEETING  
TUESDAY, AUGUST 27th, 7:30 p.m.  
at Hyde Memorial Observatory

## A SEPTEMBER MEETING NOTICE:

ATLAS SITE WORK BEE  
SATURDAY, SEPTEMBER 7th, 2:00 p.m.  
(For site preparation one week before the club picnic)

## BRIEFS:

Wednesday, July 3rd, on National Public Radio (90.9 FM), I heard a one and a half minute program that described the Viking spacecraft missions to Mars that occurred twenty years ago. The program, called "Earth-Sky", airs every weekday at 4:50 PM and is funded by the National Science Foundation. The content is presented very well. I think "Earth-Sky" would be of interest to astronomy enthusiasts. - Bryan Schaaf

*(President's Report continued)*

the exception of about a 20 minute period of scattered clouds. We observed some great objects and enjoyed socializing. Tony Fleming provided the entertainment, with an endless barrage of stories and jokes, none of which can be repeated here. Thanks OAS for inviting us. A great time was had by all.

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# Observing Chairman's Report by Douglas Bell



For August 1996, A Special Nebraska Star Party Edition

New Moon: August 14  
Lunar object: The New Moon  
Planet: Perseids  
Messier monthly: Naked eye Messiers  
Tip of the month: Be there. Aloha!

Top 40: Dark Sky Wonders  
Deep sky: Deep Sky Wonders  
Challenge: Keeping awake and dry for an entire week

Quote: That water's really cold. Standard comment under the falls (on the Niobrara River).

Lunar feature: New Moon  
Every month the Moon grants us a few days of totally dark sky. Take advantage of it.

Planet of the month: The Perseids  
A real meteor shower, with a real dark Moon, at a real dark site. This is as good as showers get.

Messier Monthly: Naked eye.  
Well, over a dozen Messiers are visible naked eye. (Well, I really don't know how many, check and get back to me). This is the kind of thing you can only do at NSP.

Top 40: Dark Sky Wonders. Wow  
Meteors...The Milky Way from horizon to horizon...zodiacal light...nebular details you've never seen before...the North America Nebula - naked eye...following the veil all the way around...stars winking out below the horizon.....The Milky Way's central bulge...

Deep Sky: Deep Sky wonders  
Get out those cannons, MegaStar and Uranometria. See things you've never seen before: Extra-galactic globulars...the Abell galaxy cluster...the Hercules cluster...that planetary's central star...color... Barnard's E dark nebula...

Challenge: Staying awake and dry  
Well, I'm going to try. But, believe me, after three full nights and four days chasing kids its gonna be tough.

Astro trivia: I'm a time traveler. I arrive at the NSP observing site before I left the NSP cabins. How?

Answer to last month's Astro trivia:  
Mercury would be the second largest moon for both Jupiter and Saturn since both Ganymede and Titan are larger. It beats Callisto by a whopping 79 kilometers.

## Questions & Answers

Questions? I want questions.



Conducted by AstroMan

Q: In the PAC calendar I've seen terms like "apogee", "perigee", "aphelion" and "perihelion". What exactly do they mean?

A: All of the terms have to do with distance between two bodies in space. "Apogee" is the point furthest from the Earth in the orbit of a satellite. Similarly, "perigee" is the point closest to the Earth in the orbit of a satellite. A satellite, in this case, could be "artificial", like a spacecraft or even orbiting debris or "natural", like the Moon.

"Aphelion" is the point furthest from the Sun in the orbit of a body, like a planet or comet or spacecraft. Earth was at aphelion on July 5th this year. "Perihelion" is the closest point to the Sun in the orbit of such a body. Earth was at perihelion January 4th this year.

The following concept doesn't have anything to do with the inquiry, but I'll throw it in anyway. Contrary to some people's belief, Earth is closer to the Sun in January than in July. January is the colder month (for those of us that live in the northern hemisphere). Our seasons have little to do with the distance between Earth and the Sun, but rather the angle of the sunlight shining on the surface is what determines seasons (related to the 23 1/2 degree tilt of Earth's rotational axis relative to the plane of Earth's orbit around the Sun).

There are other terms that describe the closest and furthest distances to and from other bodies as well. "Apastron" is the orbital positions of the components of a binary star system when they are furthest apart. "Periastron" is likewise the closest approach positions of two orbiting stars. For example, the double star named Gamma Andromedae is a striking yellow and blue pair visible in most telescopes. The blue companion, "Gamma2", is also a double and has a very elongated orbit. It was at periastron in 1952 and at apastron in 1982. It will be back to periastron again in 2013. The yellow component called "Gamma1", by the way, is also a double star. Gamma Andromedae is actually a quadruple star system.

The closest point in the orbit of a body around the Moon is called "perilune". The furthest point in the orbit of a body around the Moon is called "apolune". These terms were commonly used to describe orbital positions during lunar orbit maneuvers of Apollo spacecraft in the 60's and 70's.

The Jupiter counterpart terms are called "perijove" and "apojove". The Galileo spacecraft was at apojove on March 14th this year during its first orbit around Jupiter.

URGENT! This AstroMan Q & A feature was conceived as a club resource by which questions could be asked that otherwise might not be asked in person, such as at club activities, and answers could be provided. Since this feature first appeared in the February P.A. issue, nearly all the questions have been provided by one person and I, the editor, made up the rest. Please call or write in your questions for AstroMan and save him the humiliation of being FIRED. Questions about astronomy or PAC can be confidentially sent to AstroMan in care of Bryan Schaaf (see address and phone number below).

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 Members...\$15/yr.; Family Memberships...\$17/yr.; Address all new memberships, renewals, or questions to THE PRAIRIE ASTRONOMY CLUB, INC., P.O. BOX 80553, LINCOLN, NE 68501. For other club information contact one of the following: President Dave Scherping (Lincoln) 477-2596, Treasurer John Bruce (Lincoln) 483-0389, Secretary Bryan Schaaf (Lincoln) 438-4285. All newsletter comments and articles should be sent to: Bryan Schaaf, 1309 W. PLUM, LINCOLN, NE 68522 (or E-mail to schaaafb@aol.com) ten days prior to the club meeting. Club meetings are held the last Tuesday of each month at Hyde Memorial Observatory in Lincoln, Nebraska.

## MEETING ADJOURNED...



### Secretary's Report by Bryan Schaaf

The June 25th PAC meeting was rather lengthy about one issue alone, but first things first. There was one visitor, Douglas Jebens. He is from Columbus, NE. and it was his first visit to Hyde Memorial Observatory. We may be seeing more of him as he had questions about the club and membership dues in particular.

Comet Hale-Bopp is in the constellation Scutum now and as of the meeting time it was hovering around 6th magnitude. It is readily visible with binoculars and visible with direct vision "if you know exactly where to look from a dark site" (see the Hale-Bopp finder chart in last month's newsletter). Watch it get brighter in the coming weeks.

President Dave Scherping, like last month, again enjoyed announcing a observing award. Larry Hancock earned his Honorary Messier Award after observing his last remaining forty Messier objects.

The tentative date for the annual club picnic was set for Saturday, September 14th at a previous meeting last Winter. Now the date has been made official, so mark your calendar. While you're at it, also mark your calendar for a Atlas site workbee on September 7th. We want the site to be neat for our picnic/star party, don't we?

To help organize workbees a little better Dave Scherping has volunteered himself to be the "call person". This means that if you or anyone will be at the Atlas site to help, then please give Dave a ring prior to going, so that there is a count of people. Knowing how many people will be there will help determine the feasibility of a scheduled workbee and help define what can reasonably be accomplished in about three hours time.

Treasurer John Bruce related the latest happenings going on with 20th Century Castles. Briefly the organization sent John a one hundred dollar check, as payment for the "option to buy the land for \$20,000" in the time frame of a year. I will not attempt to reiterate what John said, since I don't know or fully understand the details. Del Motycka suggested that the time to decide whether or not we want to sell the site land is now, because "that's what this negotiation for the 'option to buy thing' is about. Once and if we decide to sell then that's it!"

The meeting was rather lengthy because of the "sell or not to sell issue" that touched off many opinions about the degree of site usefulness, who has been using it and possible observing site options in the future. After several opinions were expressed over several minutes time Jack Dunn suggested a motion to "empower the executive board to sell the property as it so decides."

I said that a club owned observing site should be maintained and if it isn't maintained regularly, then sell it, if possible. Del Motycka expressed a similar view. Ron Veys expressed that there is nothing wrong with the site. It is much the same as it was when we first bought it (other than the concern over the encroachment of light pollution) and has a lot going for it...one reason to buy the land in the first place was to establish a observatory or building of some sort to house club telescopes...but the overall club enthusiasm for the site has weakened". John Tobler, a relatively new member, said he recently bought a telescope and paid for a site gate key. He described the site as "a real asset where we can go to observe... away from the city". He said that "It is

very nice having a place like the Atlas site to go to observe with privacy. State parks just don't do it."

Earl Moser interjected that his yard near Hickman is still available for observing (It was the club observing site prior to the purchase of the Atlas site). Other possibilities expressed included leasing of land, buying another site in the future (with the \$20,000 dollars and whatever other treasury money, if necessary), or observing from the Omaha Astronomical Society's site near Weeping Water, Nebraska. There were MANY opinions expressed for and against each, but the motion to "empower the executive board to sell the property as it so decides" carried with a landslide vote. Two persons voted against the motion. This issue is clearly an emotional one for club members.

The June 26th NSP meeting was announced by Dave Scherping and he encouraged members to attend because there are many important issues that the meeting will address like the final list of speakers, traffic control decisions, a list of vendors, door prizes, and other volunteer positions filled and not yet filled.

Tom Miller reported that the number of registrations have already exceeded those of last year.

The International Dark Skies Association membership for the club was about to expire. There was a motion moved and carried to renew the membership.

Lastly, the club 12.5 inch equatorial telescope currently housed in a shed at Earl Moser's yard has got to be moved soon (see last month's Secretary Report). Additional people volunteered to help and John Bruce said he would call people to get together and get it done. The telescope movement volunteers at the time of the meeting were: Liz Bergstrom, John Bruce, Larry Hancock, Del Motycka, Bryan Schaaf, Dave Scherping, Jason Stahl and Ron Veys.

The meeting adjourned at 8:30 p.m. followed by a video entitled "Star Gazers: 100 Years of the Lowell Observatory" provided by Jack Dunn.

#### \*Newsletters Newsletters Newsletters\*

There are several extra Prairie Astronomer newsletters (April and June issues) available for anyone (members or nonmembers alike) that wants them. If interested, contact the Secretary. Also, if you or a member you know of is not receiving newsletters in the mail, then please notify the Treasurer.

## WELCOME NEW MEMBER!

Douglas Jebens  
3824 12th St.  
Columbus, Nebraska 68601  
402-564-7900  
dbjeben@nppd.com

# The Prairie Astronomy Club August 1996

S	M	T	W	T	F	S
<p><b>4</b> First satellite launched into lunar orbit by Apollo 15 crew</p>	<p><b>5</b> Comet Hale Bopp 18h 05.5m -08o32' 5.7 mag.? Galileo Orbital Trim Manuever # 8</p>	<p><b>6</b> LAST QUARTER MOON 12:25 AM Comet Hale-Bopp 8 degrees SE of M 14 (NGC 6517) Vostok 2 launched, 1961</p>	<p><b>7</b> Arienne 4 launch scheduled for Telecom 2D/Intelsat 2 Apollo 15 splashdown, 1971 (launch was July 26th) first test of lunar roving vehicle</p>	<p><b>8</b> First direct evidence of what may be planets around another star other than our Sun is announced. Vega, 1983</p>	<p><b>9</b> Moon 1.2 degrees S. of Venus 11 PM Stellafane, Springfield, VT. (Aug. 9-11) Luna 24 launched, Moon sample return mission, 1976 (Russia)</p>	<p><b>10</b> Magellan radar mapper arrives at Venus, 1990 Moon 6 deg. S. of Mars 4 PM Comet Hale-Bopp 17h 59.4m -08o07' mag. 5.67</p>
<p><b>11</b> 3RD ANNUAL NEBRASKA STAR PARTY ALL WEEK Asaph Hall discovered Deimos, moon of Mars, 1877</p>	<p><b>12</b> Perseld Meteor Shower peaks (Meteor Storm?) Moon at apogee, 252,573 miles 11:30 AM First Communications Satellite launched, Echo 1, 1960</p>	<p><b>13</b> Possible Venus occultation of SAO 40682 (8.2 magnitude star) &amp; SAO 95634 (9.2 mag. star)</p>	<p><b>14</b> NEW MOON 2:34 AM Soyuz TM-24 scheduled launch</p>	<p><b>15</b> FAST (Fast Auroral Snapshot) Pegasus XL scheduled launch Comet Hale-Bopp 17h 53.8m -07o44' mag. 5.57</p>	<p><b>16</b> Moon 0.3 degree S. of Mercury 1 PM Comet Brewington 12h 08.4m +15o22' mag. 9.4 and dimming</p>	<p><b>17</b> Asaph Hall discovers Phobos, moon of Mars, 1877 Pioneer 7 (Sun Orbiter) launched, 1966</p>
<p><b>18</b> Comet 1996 A1 Jedicke, perihelion (4.06 AU) First US Spy Satellite launched, Corona, 1960</p>	<p><b>19</b> Venus is at greatest western elongation (46 degrees) Sputnik 5 launched, carries two dogs into orbit and returns them, 1960</p>	<p><b>20</b> Viking 1 launched, 1975 Voyager 2 launched, 1977 GE-1 Atlas 11A scheduled launch Comet Hale-Bopp 17h 48.7m -07o21' mag. 5.57</p>	<p><b>21</b> FIRST QUARTER MOON 10:36 PM Mercury is at greatest western elongation (27 degrees) Gemini 5 launched, 1965 G. Cooper, P. Conrad</p>	<p><b>22</b> In the news, 1977: Eleven min. after rocket booster separation Voyager 2 experienced turbulence; 18 hrs. later it tumbled crazily until control was regained.</p>	<p><b>23</b> Lunar Orbiter 7 returned first image of Earth from vicinity of the Moon, 1966</p>	<p><b>24</b> Moon 5 deg. N. of Jupiter 5 PM Voyager 2 flies past Neptune, 1989 Johnson Space Center Open House, Houston, TX.</p>
<p><b>25</b> Voyager 2 flies past Saturn, 1981 Comet Hale-Bopp 17h 44.2m -07o01' mag. 5.47</p>	<p><b>26</b> Spring equinox, first day of Spring in the northern hemisphere of Mars 8/27-8/29: Applications of Future US Spaceborne Imaging Radar Missions Workshop, Sioux Falls</p>	<p><b>27</b> PAC MEETING 7:30 PM AT HYDE MEMORIAL OBS. Moon at perigee, 222,933 miles 11:54 PM Galileo O.T.M. # 9</p>	<p><b>28</b> FULL MOON 12:52 PM William Herschel discovers Enceladus, moon of Saturn Gemini 5 splashdown, 1965</p>	<p><b>29</b> Interball 2 scheduled launch, Russia</p>	<p><b>30</b> Moon 3 deg. N. of Saturn 5 PM First night launch of Space Shuttle Challenger, 1988</p>	<p><b>31</b> Mars 6 deg. S. of Pollux at noon Comet Wild4, perihelion (1.989 AU)</p>
<p><b>1</b> Mercury (mag. -0.3) passes 0.5 degree N. of Regulus 5 AM</p>	<p><b>2</b> Asteroid 1685 Toro near Earth flyby (0.22 AU)</p>	<p><b>3</b> Moon 3 degrees N. of Saturn 8 AM Comet Brewington, perihelion (0.92 AU), new comet (discovered visually on July 3rd by Howard Brewington)</p>				

Mercury (mag. -0.3 on Aug. 1st and +0.7 on Aug. 31st) makes an appearance low in the west after sunset this month. Venus (mag. -4.3) appears low in the east during early mornings. Mars (mag. 1.5) is only 10 deg. NE of Venus at the beginning of August and 3.25 deg. by the end of August. Jupiter (mag. -2.6) is the most prominent planet of the evening sky and at its maximum apparent size for the year. It is visible in the south-southeast when evening twilight ends and sets at about 2 PM. By the end of August the giant planet will be within the same telescope field (less than 2 deg.) as globular cluster M 22. Neptune (mag. 7.9) and Uranus (mag. 5.7) follow Jupiter in the sky and are visible in binoculars near the Sagittarius-Capricornus border. Consult a finder chart to locate them (page 70, Sky & Tel, April issue). Midway between the two planets and 1.5 deg. south is the dim globular cluster M 75. Saturn (mag. 0.6) rises at about 10 PM early this month. Telescopically the southern face of the Saturnian rings are visible this month and the planet's shadow will fall against the ring system. By the end of May Comet Hale-Bopp edged barely to unaided eye brightness, so it is a sure (?) bet that the comet will be readily visible this month from a dark site. It will begin August in Serpens and cross over into Ophiuchus on August 5th. On the evening of August 6th the comet will pass between globular star clusters NGC 6517 and NGC 6539, and 1/4 degree S. of double star Tau Ophiuchi (mag. 5.3). *Clear skies!*

# A HISTORY OF THE PRAIRIE ASTRONOMY CLUB:

INTO THE SEVENTIES & BEYOND (PART TWO)  
by David Knisely

In 1966, the club again moved its meeting place back to the Van Fleet Science building on the Wesleyan campus, where it remained for three years. On June 9th, 1967, club members first attended an Astronomical League Mid-States Regional Convention to see what the League could offer. In August of that year, the club officially joined the League, and changed eastern Nebraska from North Central to Mid-States Region affiliation.

In August of 1968, the first annual club family picnic and star party was held at Wagontrain Lake east of Hickman. In 1969, the club moved its meeting location to the main lecture hall in the newly completed Olin Hall of Science on the Wesleyan campus. Meetings were generally held on the last Tuesday of each month at 7:30 p.m. The meetings often used the Jensen Planetarium downstairs for a preliminary program, while a business board meeting was held in the lecture hall.

Nineteen seventy was a banner year for the Prairie Astronomy Club, starting with the Solar Eclipse of March 7th, when a few die-hard members traveled to Mexico to witness totality. In Lincoln, the club provided the public safe viewing of the eclipse at the Gateway Shopping Center. From June 5th through the 7th, the Club was the host for the 1970 Mid-States Regional Convention of the Astronomical League, which was held at Olin Hall of Science on the Wesleyan campus. In the fall of 1970, club members traveled to Beatrice to provide a public sky show at a Chevrolet dealership when the "Vega" car was introduced. Club membership varied at this time from around 35 to as many as 50 people. The Gateway public shows also continued on a regular basis.

In the summer of 1973, the Prairie Astronomy Club and the Omaha Astronomical Society together hosted the National Convention of the Astronomical League in Omaha. During the mid 1970's, a group of individuals headed by club member Carroll Moore began a fund drive to build a public observatory for the city of Lincoln in time for the nation's 1976 bicentennial celebration. Although the date for construction was not met, a generous donation from the A.L. Hyde estate made possible the dedication of the Hyde Memorial Observatory in Holmes Park in November of 1977. Several club members participated in the planning and design of the observatory. The club built an 8 inch Newtonian and donated it to the observatory. Regular Gateway Shopping Center sky shows were discontinued, as members turned their attention to helping to staff the observatory on Public viewing nights. Once Hyde Observatory began operation, club membership went up to over 60 people and the club moved its meetings to the observatory's lecture room. The February 26th, 1979 eclipse of the sun was viewed by the public from the observatory, assisted by club members and covered on local television. Also some members and students, led by Carroll Moore, observed totality from North Dakota.

In March of 1981, the first of several semi-annual trips was taken to the new Kansas Cosmosphere and Space Center in Hutchinson, to view two OMNIMAX films, along with some of the space hardware which would be put on display in the near future. Later years would bring trips to the Chicago Museum of Science and Industry, Adler Planetarium, and Behlen Observatory. In the early 1980's with money from the Junior League of Lincoln, a unique safe solar telescope was designed and constructed by club members for use mainly by school children. The

club also first put on its annual Astronomy Day display at the Gateway Gallery Mall. The annular eclipse of May 30th, 1985 was a record breaker for both Hyde Observatory and for the Prairie Astronomy Club, as over 500 people lined up to view the sun.

The year 1986 brought the return of Halley's Comet, and with it, large crowds at Hyde Memorial Observatory. Club members provided their own telescopes outside for the public to help ease the extreme crowding in the observatory. When the comet got too low in the south to be visible from Hyde, club members staged a late night public viewing session at a rest area 15 miles south of Lincoln. An enormous crowd of nearly 2000 people observed the comet through club members' instruments from that location.

Concern over light pollution at the club observing site near Hickman in 1986 prompted the formation of a working group to establish a new dark sky site for the club. On March 24th, 1987, the club formally took possession of a decommissioned Atlas missile base for its new dark sky site.

The 1990's brought even more activity to the Prairie Astronomy Club. The club again hosted the Astronomical League Mid-States Regional Convention in June of 1993 at Nebraska Wesleyan University. Membership continued to increase, nearing 100 as the year drew to a close. In the summer of 1994, several members of the club created the first annual NEBRASKA STAR PARTY, bringing over 60 amateurs from locations across the country to view in the dark skies of the Sand Hills at Merritt Reservoir. The club also built a second club telescope: a 13.1 inch Newtonian which can be set up by one person in only a few minutes. The following year, the Second Annual Nebraska Star Party had 200 people from 11 states attending a week of observing and family fun activities. The future indeed looks bright for one of the best organizations in amateur astronomy, THE PRAIRIE ASTRONOMY CLUB.

## Moon & Sun Data for N.S.P.

(Latitude 42.87 Longitude 100.55  
for Valentine, NE., Cherry County)

	August 11th:	August 17th:
Moon set:(on previous day)	5:23 PM M.D.T.*	
	8:42 PM	
Moonrise:	3:27 AM	9:07 AM
Moonset:	6:04 PM	9:11 PM
Moonrise:(on following day)	4:20 AM	10:07 AM
Moon phase:	Waning Crescent 6 % illuminated	Waxing Crescent 11% illuminated
Beginning of Twilight:	5:13 AM	5:21 AM
Sunrise:	5:44 AM	5:51 AM
Sunset:	7:49 PM	7:41 PM
End of Twilight:	8:20 PM	8:11 PM
Sun phase:	Full 100% illuminated	Full 100% illuminated

\*All times are Mountain Daylight Time

# FREEMOUNT PEAK ON MAY 11:

## VIEWS WORTH DYING FOR?

By Mike Maiman

This article is from "The Bulletin of the San Mateo Astronomical Society", June 1996 edition. I thought of it when I read the article "Astronomy Dangerous?" in last month's PAC newsletter. Mike, the author, has verbally given me permission to copy it and send it to you.

I was at the star party mentioned in this article, but not a member of the club yet, so I was not mentioned.

I am planning on being at NSP and look forward to seeing everyone.

Kelly Erlandson, Kelly4186@aol.com

On Saturday May 11, Jere Yost, Bob Bruynesteyn, Wayne Lanser, Cliff Christianson, Kent Noble, Leroy Amen, Ron and Paul Cardinale, David Minium, Laurie Palmer, Hanns and Margret Ullrich and myself were in attendance at a spectacular night on Freemount Peak.

The night air was warm and still, providing "good seeing" and allowing Bob Bruynesteyn to concentrate on the observation of double stars.

Searching for Messiers was going well for a short while in the Virgo cluster of galaxies, and then I got lost. I had not adequately done my homework before going to Freemount Peak, and I think that more preparation at home with books and articles would have been useful. In addition, I forgot my fold-up table, which made recording of my observations awkward. It's easy to forget to bring some useful item to a star party. Ron Cardinale (who kindly supplied me with a fuse for my battery) suggested the use of a checklist.

The title of this article was motivated by my sleepiness on the way home from Freemount Peak. I usually leave no later than 12:30 a.m. The weather was great, and the camaraderie was also. I did not leave until two o'clock. It was a struggle to stay awake once I got off the mountain onto the hypnotic stretches of freeway, and I found myself dozing off, being awakened by the bumps of the lane dividers. I now realize that while astronomy should be a *safe* hobby (after all, this is not hang gliding, mountain climbing or lion taming), I was turning it into a *risky* hobby by driving home at that hour.

### There are alternatives to falling asleep at the wheel:

1. Leave the observing site earlier. This is easier to do in the Winter months, when observing can begin earlier in the evening. Nevertheless, unless you have the nerves of caffeine, it may be foolish to drive for long stretches in the middle of the night.

2. Sleep at the observing site. This might be in your vehicle, as some of our members have done. Campsites are available at Freemount Peak (it is after all a state park), but you should arrive a few hours prior to sunset in order to secure a spot. Of course, bring food and camping materials...you can put together your own camping checklist!

3. Sleep close to the observing site. Once you get down the hill, you can rest your weary body in bed at either the San Juan Inn (phone 408-623-4380) or at La Posada Hotel (phone 408-623-4030). Although a night at these places will run you a few bucks, it certainly beats having your next star party in heaven!

# DID YOU KNOW THAT...

by Ben Rush

Astronomers are able to identify the distance to a cepheid variable by first measuring the cycle of the star, which is an indication of its absolute brightness. Then, by comparing the absolute brightness to its apparent brightness, the distance can be found.

Astronomers estimate that approximately 10 tons of space material burns up in the earth's atmosphere every day.

NGC 188, in Cepheus, is the oldest open or galactic cluster that we know of. Try to see if you can spot it.

The terminator is the dividing line between night and day on the moon. Amateur astronomers enjoy this dividing line because of the shadows it causes on the moon, revealing its surface shape. If you missed the terminator last time, have no fear, it will be back. :-)

The star Vega can, indeed, be seen in broad day light, you just need to know where to look...but, that's the problem. Many people who live where Vega reaches the zenith will, at times, look up through their chimneys to spot this big blue star.

01 July 96

Here at Lime Creek Observatory, Smithsonian # 721, we're engaged in tracking minor planets using a Meade 10" CST and a Santa Barbara ST7. Since starting our operation in March 1996, we've discovered 3 new minor planets - 1996 JE, 1996 LB, and 1996 MA. We believe these may be the first minor planets discovered from a Nebraska site. Our equipment is located 15 miles N.W. of Cambridge, Nebraska.

We'd be happy to share information and experiences with any of your membership who is interested in tracking asteroids and comets.

Wishing you all the best of seeing and a great 1996 star party,

Bob & Shirley Linderholm, lindh@csb.cambridge.ne.us

## Comet Hale-Bopp Report :

prepared by Bryan Schaaf from information from Gary Kronk's Comet Page on World Wide Web

The first reported unaided eye view of Comet Hale-Bopp was on May 20th from a VERY dark observing site by Terry Lovejoy. The magnitude estimate was from 6.7 to 7.4 (May 20th-23rd). The comet was measured to be magnitude 6.5 at the beginning of June and 6.1 by the middle of June. On June 19th it was magnitude 6.0 and 10-15 arc minutes in size. On June 23rd it was within 4 astronomical units of the Sun and about 3.1 AU from Earth.

Comet Hale-Bopp is an EASY object to see with binoculars (on July 1st) and by the time you receive this newsletter it WILL already be visible by the unaided eye for most of the rest of us - that is if you look from a dark observing site (magnitude 5.8 ?).

# VISITING HYDE OBSERVATORY

by Brenda Culbertson

Hyde Observatory was one place I had been wanting to visit but never took the time to until July 6th. The night was short and unfavorable for doing any serious observing due to the high humidity and a few unforgiving clouds. However, Jerry Williams and Lee Thomas were readying for visitors when I arrived shortly after 9:00 PM. We waited for enough daylight to pass below the tree line, and the few very bright stars to show, for us to start seeing a few things.

Jerry, all the while, was asking and answering questions in the observing area with Lee setting up a program inside. The roof was rolled away and the three scopes were ready to go. After Lee had shown a group the video inside, they went out to take a peek at what was available through the scopes. My estimation is that between 30 & 40 people went out.

Dave Scherping and his family showed up around 9:30 and we talked about NSP - again. When we were almost finished with our conversation, we began discussing things in the sky and, being prompted by some of the others, went to the scopes to get a few treats in the eyepieces. Comet Hale-Bopp was lost in the haze, but the Ring Nebula, M13, Jupiter, and a few other fairly bright objects were easily recovered. All the while, Jerry answered questions.

Time was too short and I left somewhere around 11:00 PM, but enjoyed my visit. Next, I would like to see the club's observing site. Perhaps I should let someone know I will be coming next time instead of just popping in.

Thanks for the warm welcome and the observing from Hyde Observatory.

Brenda Culbertson

"We do not ask for what useful purpose the birds do sing, for song is their pleasure since they were created for singing. Similarly, we ought not to ask why the human mind troubles to fathom the secrets of the heavens. The diversity of the phenomena of nature is so great, and the treasures hidden in the heavens so rich, precisely in order, that the human mind shall never be lacking in fresh nourishment."

Johannes Kepler  
(1571-1630)

*Brenda Culbertson has been a long time active member of The Northeast Kansas Amateur Astronomer's League (NEKAAL, Inc.). She served as Vice President (1989), President (1993), Newsletter Editor (1992-1995) and contributed to the club's success and longevity in countless ways. In addition to her support of NEKAAL, she has organized and hosted the annual Astronomy Workshop(s) of Northeast Kansas for the past seven years!*

## Uh...More Auroral Sound? Yep

After the April 30th Prairie Astronomy Club meeting, I provided the program in the form of a talk about auroral sound. About half a year before this talk, I also responded to a questionnaire on world wide web about (my) experiences of hearing auroral sound. Recently, this month, I found the web page (<http://www.tp.umu.se/Space/AuroralSound.html>) that lists all the responses of the questionnaire, plus results of recent auroral sound research including a radio telescope recording of audible level auroral sound - a feat never before accomplished!- Bryan Schaaf

# JULY 12TH NEBRASKA STAR PARTY MEETING MINUTES

by Dave Scherping

Attendees: Dave Scherping, John Johnson, Bill O'Donnell, Louis Dorland, Jason Stahl, Mark Dahmke, John Bruce, Dave Hamilton, Tony Fleming

PROGRAMS (Jack Dunn, Dave Scherping): Richard Pirko of Youngstown State Univ. (Ohio) will be the main speaker. He will speak on the Friends and Partners Program (Russian space program). Brenda Culbertson will speak on Archeoastronomy. Dave Knisley will speak on observing the Sun in Hydrogen Alpha. Winston Warner of OAS will speak on Astrospectrometry of Stars. Dr. Bruce Twarog of U of K has verbally said he will speak. Vic Winter of Kansas City said he can do a program if he can get off work that week. Joel McCleary and Sean O'Corrain have volunteered to give a talk on the Nebraska Science Odyssey and Nebraska Math / Science outreach program.

Need to finalize speaker schedule. Need to get speaker biographies and program abstracts to Bill O'Donnell within the next week.

DOOR PRIZES (Louis Dorland): A lot of great door prizes have been donated. Need to contact those who donated last year, but have not donated this year:

Dave Scherping will call QSP, Televue, ELB Software, & Mazon Productions. Louis Dorland will call Software Bisque, Parks, Kalmbach. Dave & Louis to contact Omaha & Lincoln stores for possible kids' door prizes.

NSP will donate an OIII filter, Telrad, & \$100 worth of kids' door prizes.

MEETING ROOM: Everything is all set. Meetings will finish by 5:00 PM.

MEALS (John Johnson): Banquet at Peppermill will begin at 6:00 PM. Menu will be prime rib, baked potato, vegetable, salad dessert, & tea/coffee. Price will be \$10 adult/\$5 kids which includes tip, provided they will meet our requests. Payment will be made at registration table prior to 5:00 PM Thursday. Name tag will be punched to verify payment.

Tuesday's catered meal will be hamburgers. Payment will be made at time of meal.

Thursday's meal will be BBQ chicken. Payment will be made at meal.

CAMPING/OBSERVING AREA (Dave Scherping): Dave talked with Jim Fox to verify that mowing will be done. Need to call back in two weeks to follow up.

NSP BOOKLET (Bill O'Donnell): Need to add program schedule & speaker info (Dave Scherping, Jack Dunn).

Need new AstroMan. (Dave Scherping)

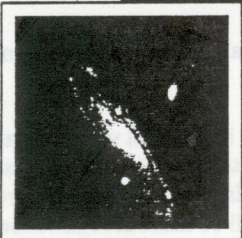
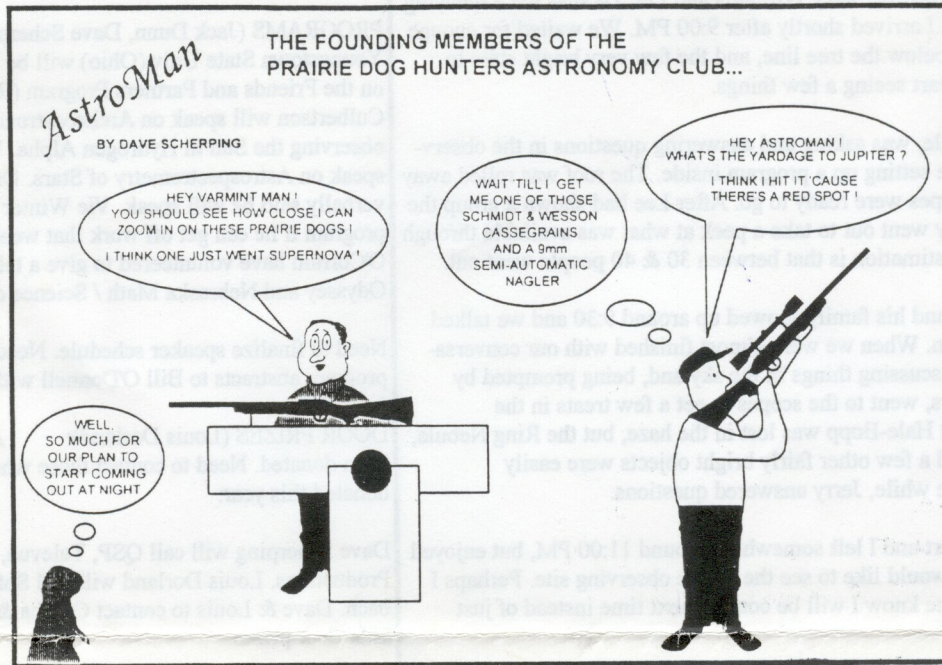
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(NSP Meeting minutes continued from page 7)

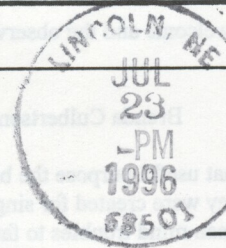
T SHIRTS (John Bruce): Need to place order this week. Order 30 extras (10 large, 10 X-large, 5 medium, 5 XX-large)

CONTESTS awards will be as follows: Photo contests: Roll of Hypered film, red flashlight & certificates (5 each), ATM Contest: Plaques & certificates (3 each), Most Naked Eye Messiers: Messier related book + certificate, Deep Sky Challenge: Certificates

PUBLICITY: Need to re-post info on Internet. Dave Scherping to post on sci.astro.amateur and e-mail to John Johnson & Dave Hamilton. John Johnson to post on AOL. Dave Hamilton to post on CompuServe.



The Prairie Astronomer  
 c/o The Prairie Astronomy Club, Inc.  
 P.O. Box 80553  
 Lincoln, NE 68501



First Class Mail

Next PAC Meeting  
 JULY 30th, 1996

July 96

Mr. Earl Moser 9/97  
 P. O. Box 162  
 Hickman NE 68372