



August 2005 Newsletter of the Omaha Astronomical Society Issue 212

Hubble Photo of M51
How Long will Hubble Last?



General Meeting of the
Omaha Astronomical Society
Friday, August 5 at 7:30 PM
Durham Science Center, Room 169
UNO Campus

Program: See Page 3

Events

August Club Star Party
Saturday August, 2005
Club Site Weeping Water

Mahoney Public Star Parties

August 12, 2005
September 9, 2005

7th ANNUAL OAS_PAC BANQUET

Mahoney State Park
Helene Sapp Riverview Lodge
October 14th, 2005 at 7:30 PM

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BULLETINS

August Meeting Presentation

Clark & Deb Cheney Report on
NSP 12

Good August Dates to Observe at the OAS Club Site or at any other good location

Friday 5 August , new moon
Saturday 6 August , new moon
Friday 26 August , last quarter moon
Saturday 27 August , last quarter moon

Upcoming Events

Hitchcock Nature Center "Persied Observing" on
Friday the 12th of August.

This is also a Mahoney State Park Star Party on
August 12

End of August planet event; Venus and Jupiter,
the brightest planets in the sky, stage a brilliant
display this week.

August Astronomy Quiz

1. Where could one find “regolith” and what is it?
2. What periodic objects’ names means “long-haired one?”
3. The first person to demonstrate that the universe contains star systems other than our own galaxy was...?
 - a. Edwin Hubble
 - b. Harlow Shapley
 - c. Annie Jump Cannon
4. The Spitzer Space Telescope’s main objective is a 34” beryllium mirror. It’s cooled to -450 degrees F by liquid helium. Why?
5. Spitzer is exploring the “debris disks” of dust, rocks, and gas around distant stars, looking for clues about how planets form. What conclusions were drawn when the inner part of the debris disk around some stars was missing?
6. Does our sun still have a debris disk?
7. Where is this quote from?

“But I am as constant as the northern star
Of whose true-fix’d and resting quality
There is no fellow in the firmament.”
8. In 1178 a group of monks observing the moon saw, “... the upper horn split in two. From the midpoint of this division a flaming torch sprang...spewing out, over a considerable distance, fire, hot coals, sparks.” What did they see and what is the result we see today?
9. In our solar system, 3 planets cannot be seen without a telescope, Uranus, Neptune and Pluto. True or False
10. What is the “Local Group”?

By an Anonymous Writer

August Sky Calendar

4th New Moon
12th First Quarter Moon
19th Full Moon
26th Last Quarter Moon

Recent Observing Awards None

New Members...None

7th ANNUAL OAS_PAC BANQUET

Make sure to remember that the door prizes we will be giving out this year are our best yet! Someone is going to get Lucky and win a very valuable genuine Martian meteorite from a Martian volcano. We will also be giving out a rare small lunar meteorite and other nice door prizes. As always the food will be excellent and the company of course will be unbeatable!!

ATTENTION MEMBERS

Well it's that time of year again, the Gretna 4-H Center Star Parties for the Papillion Schools begins in late August. If things go as they did last year we will have around 10 events for the Papillion schools, and two for the Glenwood schools.

The first three dates are August 25th, 29th, and 31st. Times are all at 7:30 PM even though as usual for these first few events, it will still be daylight when we start! SEE YOU THERE!

Stella Notes on OAS July 2005 Business Meeting

Old Business

1. OAS Outreach Coordinator John Johnson

1. Boy Scout Astronomy Merit Badge Lesson.

Rick & Vicki Neidergeses will have a class for the Boy Scouts on how to earn the Astronomy Merit Badge. It will be on Saturday 7/09/2005 from 9:00 am to Noon at the later Day Saints Church on 110th and Martha Streets in west Omaha.

2. Physically Challenged Observing at Mahoney State Park.

OAS Member Dave Burgess is organizing this month's Mahoney Star Party for the physically challenged. Dave works for a Nebraska State Agency that assists those who are physically challenged to have an active lifestyle.

Future Events:

3. Ms. Anne Danner of the LaVista Papillion School District contacted John and requested that the OAS sponsor (assist in) ten Star Parties at the 4-H Camp south of Gretna, NE. The first Star Parties may start in August. John will give the schedule as soon as it is let out by the School District.
4. Glenwood IA School District also requested that the OAS provide assistance or sponsor two star parties for their 6th Grade class. These have not been scheduled as of this meeting date.

2. OAS Telescope Loan Program. Coordinator J. Johnson

All OAS telescopes are loaned out to Club Members.

8 Inch SCT	Rita Corell
8 Inch Newtonian	Joe Alverado
6 Inch Newtonian	Keith Jones
13 Inch Dobsonian	Mark McGee & Family
6 inch Dobsonian	Bill Duffy

3. Messier Observing Committee. Clark & Deb Cheney

Deb & Clark Cheney reported the following astronomical

events for viewing;

1. Mercury and Venus are in conjunction for the remainder of this week.
2. Jupiter is high for viewing (but setting) in the SW sky.
3. No OAS member stated that they had used the OAS Astro Park this past month (June 2005) when it was asked of the membership.

3. OAS Astro Park Clean Up Day (Part II)

OAS VP Deb Cheney said that the 2nd Clean UP Day for 2005 of the Astro Park will be rescheduled for some weekend in September 2005. This is necessary since the 2nd Clean Up Day turned into a Rain Day and little work was accomplished.

July 2005 - Calendar of Events.

July 14th - NSP 12 Planning Meeting Mahoney SP 7:30 pm

July 9th - OAS Star Party at the Weeping Water Astro Site

July 8th - Mahoney Star Party

July 4th - Deep Impact striking Comet Tempel – 1 a.m.

New Business.

1. March 29, 2006 Total Solar Eclipse.

OAS Members George & Jodie Allen are planning on traveling to view the Solar Eclipse at that time.

2. OAS Hosting the MIDRAL in 2007.

The OAS Club will host the 2007 Mid-States Regional Astronomical League's convention. OAS President Al Dorn inquired of those present to determine if any members would be interested in serving on the MIDRAL Planning Committee. Those interested raised their hands. An appreciable number of Members indicated that they would be willing to serve in this manner.

July Meeting Program.

Short Program – John Johnson showed pictures of the three planets (Saturn, Mercury, and Venus) in conjunction that were taken earlier this week.

George Allen – Presentation on inexpensive but high tech items that can be made from house hold items to perform personal astronomical viewing.

Random Rambling Thoughts Astronomical

Harlan Seyfer

This article will be rambling, personal, and short. Last month I was a bit carried away, as I often become when getting into an astronomy subject. Where else can you mentally escape light years away from home? Even travel back in time a couple million years? It takes a photon of light 2.9 million years to reach us from the Andromeda Galaxy. And I've seen it with just my own eyes – unaided! Whenever I fill my wide field binocular view with uncountable stars, the words from the song float into my mind, “Starry, starry, night . . .” hummed softly.

Clark and Deb Cheney have said that they plan to be back from the Nebraska Star Party in time for the August OAS meeting. As Mark has posted elsewhere in this issue of *Stella*, the Cheneys will give an NSP report at that time. They will describe the event as the Perfect NSP, to be remembered for one's lifetime and recounted in legendary detail. The OAS members in attendance will hear that the daytime temperatures were consistently in the seventies, the mosquitoes were non-existent for some unknown reason, and there were no heavy winds or rainstorms. What few clouds there were dissipated every evening just at sunset, and the skies were miraculously steady and utterly transparent every single night.

You no doubt have noticed that I wrote that paragraph *before* heading off to NSP. It's the nature of star partygoers, especially to an event the caliber of NSP, to be drawn in with nearly limitless optimism. I say “nearly limitless optimism” because as I drive along Interstate 80 and up Nebraska Highway 2, I always have somewhere tucked away in a small corner of my mind the thought that something will happen. It always does.

Now that doesn't mean that “something” will be catastrophic, ruining the entire star party. That Sand Hills wind is something else. There was the year that I shoveled sand out of my tent (lesson learned: don't camp near the sandy beach – and do close the tent flap). Then there was the time my tent flattened over me and my gear (lesson learned: *really* stake down the tent). I could go on. Despite these adventures, I have enjoyed each and every NSP since my first in 1999.

Speaking of star parties, it pays to have a backup plan. At least of sorts. I won't go into details, but recently I . . . ahum . . . forgot to bring my telescope to the Mahoney Star Party. Of course it was a beautiful night. After briefly contemplating self-termination, I realized I still had my binoculars. Well at least I could still do some observing on my own, even if I wouldn't attract a line, like the telescopes were beginning to do. I slid my astronomer's chair about as low as it would go to the ground, settled in, and began searching out binocular doubles in Lyra, rising in the east. Eventually the pair of delta Lyrae came into view. The pair (delta¹ and delta²) are about 10 arc-minutes apart, making them easily viewable in binoculars. Both are nearly magnitude 5; delta¹ is a blue type B while delta² is a red type M – a very nice color contrast.

"That's an interesting chair," I heard a voice come out of the dark. I stood up to see a gentleman, whose white beard glowed in the starlight. I explained that the seat was adjustable from near the ground to the height of a large stool. The adjustability makes it ideal for viewing through an eyepiece that varies in height and changes depending upon which part of the sky the telescope is pointed. It's great for binocular viewing, since you rest up against its back and steady the view. I added that it was probably one of the best investments I've made in astro equipment, as the less fatigued the observer the better they are able to make observations.

"Why are you using binoculars?" he asked.

I decided not to tell the whole truth, so I launched into the true binocular believer's pitch. "Binoculars gather more light than my eyes alone, and they give a wider field of view than most telescopes. Also, they're highly portable. I own a computerized telescope, but still like to occasionally just relax and see what I can see with binoculars."

"What are you looking at?"

"Well, you see that bright star up there?" I pointed.

"Yes."

"That's Vega, one of the brightest stars in the sky. It's in the constellation Lyra. Lyra has several double stars that can be seen in binoculars. Would you like a look?"

“Yes, I would. Thank you,” he replied softly, but with more than just a hint of interest.

“OK. Have a seat.” I handed him the binoculars. “You don’t need to take your glasses off. I observe with mine on. Lean back against the chair to steady yourself. Look for Vega. I find that when I first bring the binoculars up to my eyes, I’m often below my target. Just sweep slowly upward.”

“I found it.” Pause. “That has to be it.”

“Now look to the lower left. Keep Vega in the center of your view. You should see two stars close together, exactly the same brightness.”

“There they are! I see them.” His voice was beginning to sound younger by the minute.

“That’s epsilon Lyrae, a popular pair. You can’t see it in binoculars, but each of those stars is another pair. It takes a telescope just a little bit larger than binoculars to see them.” All I heard was “Wow!”

I gave him a while before suggesting that he be more adventurous. “Want to seem something more colorful?” “Sure.”

“OK. Go back to Vega. Got it?” “Uhuh.” “Good. Now slowly move the binoculars down until Vega is near the top of your view. Near the center of the view should be a reddish star.”

“Got it. It’s beautiful. I didn’t know stars had colors.”

“They do. Look a little above the red star. You should see a blue one.”

“Yup. I see it. That’s impressive.”

“The red and blue stars together are called delta Lyrae. They were what I was looking at when you came by.”

“Interesting.” The tone in his voice indicated he meant it.

After he climbed up off the ground, we chatted a little longer. I said I had at home a large pair of binoculars especially intended for astronomy. I hadn’t brought them to the star party, but wished I had. I still liked the binoculars I was using that night because of their wide field of view. They and I were old friends have been together for more than 20 years.

Eventually, my guest excused himself to join a line at one of the dobs. I sat back down in the chair, raised the binoculars to my eyes, and gazed at delta Lyrae. You know, those colors are impressive.

Keep looking up.

Astronomy Quiz Answers

1. It is a fine dust that is “made from rock pulverized by eons of meteorite impacts.” You can find it on the moon.
2. Comets. The name comes from the Greek *kometes*. It’s thought they were named this because they reminded early observers of a woman’s long hair streaming away from her head.
3. Edwin Hubble (1899-1953), for whom the orbiting Hubble telescope is named. Harlow Shapley was the first to figure out our sun’s place in the Milky Way and Annie Jump Cannon completed the Harvard Classification of stars in 1901.
4. The mirror is cooled to eliminate the “noise” that every warm object emits, so that it can detect even faint heat (infrared radiation).
5. A planets had formed and cleared out part of the star’s debris disk.
6. Yes. We can observe it as “zodiacal light,” a cone shaped light in the west after sunset (or in the east before sunrise) on a clear night. It’s a disk of tiny, micrometer sized dust particles in the plane of the planets.
7. Shakespeare, *Julius Caesar*
8. They apparently witnessed a meteor crashing onto the surface of the moon. We call the resulting crater “Bruno.”
9. False Pluto and Neptune require a telescope, but under good conditions Uranus is visible naked eye as a faint star. (Magnitude 6)
10. A cluster of about 30 “local” galaxies, including our Milky Way. It is about 3 million light years across and each galaxy has it’s own motion but also move together.



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BENEFITS OF MEMBERSHIP

- ◆ Members receive the STELLA, our monthly newsletter.
- ◆ Each member is automatically a member of the Astronomical League, the only nation-wide organization for amateur astronomers.
- ◆ Use of the observing site at Weeping Water, NE
- ◆ The opportunity to borrow one of several club-owned telescopes.
- ◆ Organized trips to local observatories, planetariums and museums.
- ◆ Significant savings on subscriptions to **Sky & Telescope** and **Astronomy** magazines.
- ◆ Savings on astronomy books and printed materials.

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 \$25.00

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