



General Meeting of the Omaha Astronomical Society
Friday, July 7th at 7:30 PM
Durham Science Center, Room 169, UNO Campus
Program: See Page 3

JUNE SITE CLEAN-UP



Visit the club web site at:
www.OmahaAstro.com

Save the club money... and get your newsletter in full color by signing up for the email edition of the Stella. Signing up is easy... just send an e-mail to:

oas.mkw@cox.net

**July Club Star Party,
July 15, 2006
OAS Club Site, Weeping Water**

Notice of Sale

Larry Hogya wishes to sell his observatory, the roll off roof building closest to the parking lot and picnic area. If interest contact George Allen.

Omaha Astronomical Society is a member of the NASA Night Sky Network

Events and Stuff Section

July Meeting Presentation

Astronomy for Beginner
Observing Series #7.

EYEPEICES

By
John Johnson

July Sky Calendar

3 July	First Quarter Moon
10 July	Full Moon
17 July	Last Quarter Moon
25 July	New Moon

New Members

None

Recent Observing Awards

None

Good July Observing Dates to Observe at the Club Site or other good location

Friday 21 July , last quarter moon
Saturday 22 July, last quarter moon
Friday 28 July, new moon
Saturday 29 July, new moon

Mahoney Public Star Parties

July 14, 2006

August 11, 2006
September 15, 2006

All Friday evenings from Twilight On the Golf Driving Range of the Mahoney State Park Ashland, NE

Visit the club web site at:
www.OmahaAstro.com

Save the club money... and get your newsletter in full color by signing up for the email edition of the Stella. Signing up is easy... just send an e-mail to:

oas.mkw@cox.net

Omaha Astronomical Society June Meeting Minutes

Meeting called to order 7:34 PM, Friday, **June 2, 2006**. No rooftop observing, seven **guests** (including four Boy Scouts).

May Minutes were read, with one clarification, that the dues structure change is AL (Astronomical League) wide, not just our region. Motion to accept by Howard Bohm, 2nd by Ed Sikorksi.

The **Treasurer's report** indicated that we had income in May of \$183.90, expenditures of \$117.57 and a balance of \$5504.52.

Old Business

Outreach and Events

NSP Planning Meeting 8 June, 7:30 PM, POC Eric Balcom

16 June Public Star Party, dusk, Mahoney State Park, Driving Range

24 June Astropark, Club Star Party

9 June OPS Summer School, daytime, sun viewing, 10-12 noon.

Whispering Hills Vineyards, Wine tasting and Observing, Carson, IA, Dates (?) 24-25 June.

Astropark Visitors since last meeting? 6 People (7 visits)

About 6 OAS members met to show and tell with the Boy Scouts (to help them earn astronomy badges) Wednesday, 31 May. It was a smaller crowd than expected but went very well anyway.

Telescopes Loan Program

6 inch Dobsonian

Nina and Clete Baker

6 inch Newtonian

Keith Jones

8 inch SCT Rita Corell
8 inch Dobsonian Joe Alvarado
13 inch Dobsonian Chris Jewell
Binoculars, 11x80 **New!** Gary Grimes

Astropark is in good condition for observing. Needs some weed trimming, and TLC. Watch out for some poison ivy off in the weeds near the gate.

Awards Two Pending.

Observing Good viewing now on constellations such as Leo, Coma Berenices, Virgo. Saturn is getting low in the west, but Jupiter is still quite high and looking great. On June 3rd the Red Spot will be on meridian at around 10 PM. Bill Bond mentioned he observed a transit of Jupiter's moon Europa. Comet Schwassman-Wachman is no longer visible from our location, but you can still find it on the internet.

2007 Midstates Convention Committee has Chair, Al Dorn, and a Vice Chair, Clark Cheney. A sign up sheet was circulated for volunteers willing to help. Settled on dates of June 8th and 9th, 2007 (Fri & Sat). Discussed some topics for the Convention—Registration, Publicity, Programs & Speakers, Door Prizes, Star Party? (Third quarter moon rises after midnight), Hotels, OK to use UNO. facility.

New Business

Iowa Star party George Allen mentioned that not too far from our location is the Iowa Star Party on the Garst farm. (About 100 miles from Omaha.) It's put on by Ames Area Amateur Astronomers. Dates are Sep. 21-24, 2006. Horseback riding, camping, and cabins are available. No one present had been to this Star party first hand. More info at www.iowastarparty.com

Close Motion was made to close the business meeting by Chris Jewell, 2nd by Howard Bohm. Our next meeting will be July 7th, 2006 at 7:30 PM.

June Program Astronomy for Beginners Series #5

Telescopes: Application, Magnification, and Aperture

Kim Moss-Allen
OAS Secretary

HST camera goes to backup power

Scientists expect to return the instrument to service this weekend.

Francis Reddy

NASA engineers say they understand the problem with the Hubble Space Telescope's Advanced Camera for Surveys (ACS) well enough to restore operations July 3. Today, engineers switched ACS over to its backup electronics following a problem with the camera's primary power system that shut it down June 19.

"This turns out to be our best and safest step," says Ed Ruitberg, deputy associate director of the Astrophysics Division at NASA's Goddard Space Flight Center in Greenbelt, Maryland.

The spare electronics have never before been used in orbit. Engineers couldn't risk turning off the primary, or "A side," electronics to test the instrument's backup power ("B side") because there's a chance the primary system won't restart. But, Ruitberg says, "We accumulated 1,000 hours of operations time on the redundant electronics before launch." Engineers switched between the primary and backup systems as part of testing on the ground. "So, anything we do today we can easily reverse," he adds.

On June 19, flight software shut down ACS after voltage readings from one of the instrument's detectors fell outside the accepted range. Other instruments aboard the orbiting observatory continued to collect data.

In any given week, astronomers plan more than a dozen observations with ACS, so the shutdown deferred a week's worth of science, says Goddard's Dave Leckrone, Hubble senior project scientist. The problem had the biggest impact on follow-up studies of the Hubble Ultra Deep Field. Leckrone says these and other lost observations will be rescheduled once ACS returns to service.

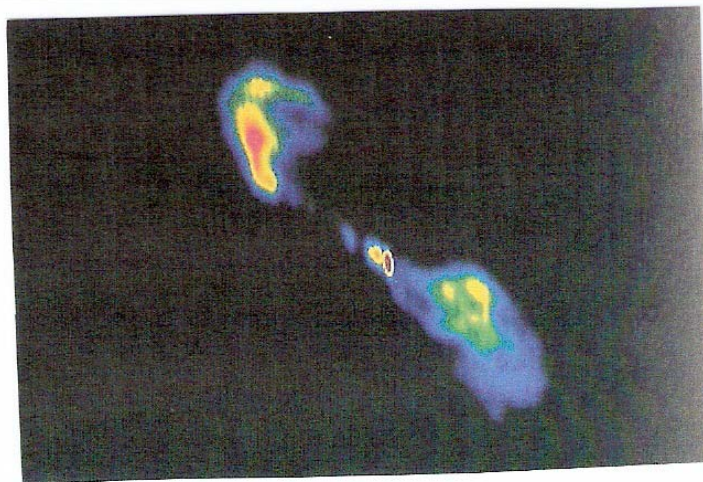
The power problem is not specifically related to the ailing telescope's need for new batteries and gyroscopes, equipment astronauts will replace if the shuttle again flies to Hubble. "Over the life of the mission, we've experienced problems all along the way," Ruitberg says. "We've prepared for this type of event. It's a bump in the road."

In fact, the ACS shutdown — and the need to recalibrate the instrument following its return to service —

Continued on page 5

Stella Quiz July, 2006

1. What **deep sky object** is this?



2. Stars **Merak and Dubhe** in Ursa Major are also called what? And why?
3. Where would one find "**Bessel**?"
4. From a new moon, which **crater** would I be able to observe first: a) Theophilus, b) Kepler, c) Archimedes or d) Macrobius?
5. In general, which have longer "**days**" (the time it takes to rotate completely on it's axis): terrestrial planets like Earth or gas giants like Saturn?
6. Which **planet** has the shortest day? The longest?
7. What do these **constellations** have in common? Carina, Pupis, Vela and Pyxis.
8. This constellation contains a star that is closest to Earth (after the sun and Alpha and Proxima Centauri) at 5.9 light years away, and has the largest proper motion (visible motion across the sky) at 10 arc seconds per year. What is the **constellation** and the **star**?

9. What is **Abell 2065** and where is it?

10. In the constellation Libra is an **eclipsing binary**, dipping from 4th down to 6th magnitude every 56 hours as the dim component passes in front of the bright one. Which **star** is it?

11. What **planet** is currently in the constellation Libra and is about 5.4 AU (astronomical units) away from the sun?

Date of First Launch Set for New Mexico Spaceport

By [Robert Roy Britt](#)
Senior Science Writer

A launch date has been set for the inaugural flight from the New Mexico Spaceport, a site officials hope will become a new hub for space tourism and other commercial launches. UP Aerospace, Inc. today set Aug. 14 as the official date for its SpaceLoft XL rocket, which will carry dozens of private and educational experiments and payloads. "Not only does this commercial space launch mark a new era in America's private space industry, it opens the door to wonderful achievements destined to occur from New Mexico," said Eric Knight, CEO of UP Aerospace (the letters are pronounced "up" as in the opposite of down).

"Our vehicle contains over 50 experiments and payloads from the private and educational sectors, worldwide," Knight said in a statement. "And it's just the first of multiple commercial space launches that we will be conducting. Another significant space launch is in October, concurrent with this year's X Prize Cup event."

The X Prize Cup is designed to spawn new private passenger-carrying spaceships and foster space tourism. The plan for Aug. 14 is for the SpaceLoft XL to carry into space several scientific and experimental payloads designed by universities, as well as more than 40 experiments created by high school students. "To open the space-access door to students at this level, we've partnered with the Connecticut Center for Advanced Technology (CCAT) and the National Aerospace Leadership Initiative (NALI)," Knight said. "These organizations have established LaunchQuest— a novel program that lets young-

sters conduct their own space-flight research." The payloads had been previously described by SPACE.com.

Several private payloads, which Knight declined to discuss specifically, will also be onboard. Companies involved include ZG Aerospace, which transports business cards and other personal items into space, and a marketing company in Italy called Realdream Association.

The 20-foot-tall, single-stage, 800-pound Space-Loft XL solid-fuel rocket will accelerate to five times the speed of sound, or nearly 3,400 mph, in 13.5 seconds.

Today's announcement represents "the next milestone for the State of New Mexico in continuing our leadership role in the second space age," said Rick Homans, Secretary of the New Mexico Economic Development Department. "This launch will put New Mexico's Spaceport on the map, and will get us one step further towards getting our FAA license."

provides scientists with an illustration "that even the darkest cloud has something of a silver lining," Leckrone notes.

Scientists had wanted to operate one of the ACS detectors at a colder temperature to reduce noise and improve the quality of its measurements, but decided against it because of the effort needed to recalibrate the instrument. "Since we're now going to have to recalibrate anyway, we're going to take advantage of this opportunity to drop the temperature on the Wide Field Camera," Leckrone explains. "It will actually produce more accurate quantitative data than it did before."

A similar problem arose in 2001, when Hubble's Space Telescope Imaging Spectrograph (STIS) shut down following a failure of its primary electronics. After engineers switched STIS to its backup power, the instrument operated until August 2004, when the backup side also failed.

Shuttle astronauts installed the \$86 million, 16-megapixel ACS on Hubble in March 2002. Like STIS, ACS was designed to operate for 5 years.

"I'm hoping it has a good, long lifetime on Side B," Leckrone says.

Observing Highlights for July

As usual we will start with the planets, early in the month you will find three planets together in the evening twilight, but you will need sharp eyes to spot all three. The brightest is Saturn which you should be able to see low in the west 40 minutes after sunset. Early in the month Mercury will be close to Saturn, but this is only for the first couple of days. Later in the month you will be able to find Mercury again, only this time it will be in the morning sky. By the end of the month Mercury will join Venus in the morning sky. It will be lower in the sky than Venus which is its usual brilliant self, shining at magnitude -3.7 . A bit higher in the sky you will find Mars, however its not much to look at.

Remember Jupiter will really dominate the night sky during July. It will be easy to find as it is shining at magnitude -2.2 , it becomes visible as soon as the sky starts to darken. It is visible from twilight to around midnight. Watch Io, Europa, Ganymede, and Callisto as they continue as always to do their dance around the planet. The view is never the same, as the view changes from hour to hour and day to day.

Well let's move on. In the July sky look for the summer triangle overhead, the summer triangle which is made up of the following; the star Vega in the constellation Lyra, Deneb in Cygnus, and Altair in Aquila. Here in Lyra you will find M57 the Ring Nebula, but if you want to take the time to look around in Cygnus you will find many nebulae here. Here you will find the North American Nebula, NGC 7000, which from a dark site can be seen in binoculars, near the tail of the swan. If you look to the left wing of the swan you will find the Blinking Planetary, NGC 6826. It is called the due to the fact that with a medium sized scope if you look at the central star the nebulosity seems to fade away, and then when you use averted vision to look away from the nebula it will brighten and the central star will seem to disappear. You can also find NGC 6888, the Crescent Nebula, which is in the middle of the constellation. Probably one of the most well know of the nebula's in Cygnus is the Veil Nebula, NGC 6960 and 6992-5, which are the brightest parts of the Veil. While viewing these some extra detail may be obtained by using either a UHC or OIII filter. Here are some of the other nebulae in Cygnus, NGC 5067-70 the Pelican Nebula, NGC 7008, MGC 7027. So get out you star charts, head for that dark observing site, hope for a reasonably clear night, and have a great night observing.

Mark Weiss

Astronomy Quiz Answers

1. These are two views of the galaxy **NGC5128** in Centaurus, also called Centaurus A. It has an interesting dust lane in the visible spectrum and in the radio spectrum is the third most powerful radio source in the sky.
2. These are the "**Pointer Stars**" in the "Dipper" and they point to Polaris, the North Star.
3. In **Mare Serenitatis**, on the Moon. It's the only notable crater in this mare and therefore easy to find.
4. **d) Macrobius**, in the Moon's northeast quadrant. From new moon, the moon is illuminated from the eastern side first.
5. The rocky, **terrestrial** planets.
6. Shortest day—**Jupiter** at 9.8 hours; longest day **Venus** at 243 Earth days.
7. They all used to be part of a large, sprawling constellation called **Argo Navis**. It was named after the Argo, Jason's ship in the legend of the Golden Fleece.
8. This is **Bernard's Star** in **Ophiuchus**, the Snake Handler.
9. **Abell 2065** is one of the densest cluster of galaxies known, more than 400 are clustered tightly together and are about 1000 light years away from us. It is near Beta in **Coma Berenices**.
10. **Delta Librae**
11. **Jupiter**

Resources: The Star Guide, 1993, Kerrod, Robin; Sky Watch, 1993, Lancaster-Brown, Peter; www.heavens-above.com

Notice

The 13th Annual Nebraska Star Party will be held the week of July 23rd to 28th, 2006 at Merritt Reservoir, 27 miles south of Valentine, Nebraska.

Club Officers

President: Al Dorn 291-5595	al1@ditol.com
Vice President: Mark Weiss 291-5322	mweiss4@cox.net
Treasurer: Bill Bond 491-4135	Bill.bond1@cox.net
Secretary: Kim Moss-Allen 291-7887	dallen@novia.net
Program Chair: Eric Balcom 491-3502	ecbalcom@msn.com
Outreach Coordinator: John Johnson 333-5460	jwjohnson@oppd.com
Stella Editor: Mark Weiss 291-5322	mweiss4@cox.net

ANNUAL MEMBERSHIP DUES

Regular/Family
\$25.00

Junior/Student
\$10.00

Newsletter Only
\$10.00

Send your check to:
The OAS
c/o Bill Bond
12835 Aurora Plz,
Lot 237
Omaha, NE 68164

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.

STELLA is a publication of The Omaha Astronomical Society.
Please send related correspondence to: STELLA, c/o Omaha Astronomical Society,
P O Box 540424, Omaha, NE 68154
email: stella@omahaastro.com

