



General Meeting of the Omaha Astronomical Society  
Friday, June 1st at 7:30 PM  
Durham Science Center, Room 169, UNO Campus  
Program: See Page 3

### MSRAL 2007 Convention Cancelled

Due to a lack of advance registration, it appears that there will not be a quorum of Mid-States regional clubs and societies attending this year's convention, scheduled for June 8/9, 2007 in Omaha, Nebraska. The MSRAL Convention Committee has therefore decided to cancel the event immediately while the opportunity exists to recoup some of the deposits for meeting sites and catering. This will prevent a greater financial burden for both MSRAL and the host club, the Omaha Astronomical Society. We apologize for inconvenience this may cause MSRAL members, and hope that MSRAL Convention 2008 is a great success.

Al Dorn Chair

PS Those members who paid by check will be able to pick up the check at the June Meeting.

**Dark Matters** by Lindsey Baker  
Omaha set to obliterate lesser galaxies  
— well, almost

Sometimes forgetting Omaha is at Nebraska's edge is easy — what with the seemingly endless arrivals of retailers and restaurants, the outcrops of high-rise, high-end condominiums, and recent attention from The Boston Globe and The New York Times. But drive west outside the city, and suddenly the flash of Omaha fades, and Nebraska opens up — the ancient plains, the agrarian backbone, the unfettered night sky.

But even there, the glare of Omaha is creeping in. According to the National Park Service Night Sky Team, by the year 2025, viewing constellations from the contiguous United States will be virtually impossible. In the land of the good life, where the darkest night skies seem so usually near, the simple facts of city lights so obscuring miles and miles of stars are hard for some to swallow.

"I'm not sure that statement's totally true for some areas of the country," said John Johnson, outreach coordinator for the Omaha Astronomical Society. But the society's once-prime sky-viewing sights south of Weeping Water, at Mahoney State Park between Lincoln and Omaha, and at the University of Nebraska Behlen Observatory in northeast Lincoln, Johnson said, admittedly are not the bearers of sights they used to be. "Even way out there," he said, "there's a light dome from Omaha." That light dome — through a telescope, a hazy, orange glow present for at least 50 miles outside Omaha — is the direct effect of light pollution, which is "any adverse effect of artificial light including sky glow, glare, light trespass, light clutter, decreased visibility at night, and energy waste," according to the International Dark-Sky Association.

Essentially, Johnson said, city lights — particularly "cobra head" street lamps and decorative neighborhood lights — throw unshielded light into the night sky, obscuring all but brighter constellations, stars and planets. More often than not, Johnson said, city lighting is chosen for beauty or cost, not for preserving night skies, which he said doesn't, on the surface, seem a very alarming issue.

"But it is a growing problem," he said. "Just like a river or refuge, pristine, (continued on page 3)

**June Club Star Party,  
June 16th, 2007  
OAS Club Site, Weeping Water**

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

# Events and Stuff Section

## May Meeting Presentation

The Gas Giants "Jupiter & Saturn"

Eric Balcom

## New Members

None

## Good May Observing Dates to Observe at the Club Site or other good dark sky location

Friday 8 June 07, last quarter moon  
Saturday 9 June 07, last quarter moon  
Friday 15 June 07, new moon  
Saturday 16 June 07, new moon

## Mahoney Public Star Parties

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

### Friday June 15, 2007

Friday July 13, 2007

Friday August 10, 2007

Friday September 14, 2007

## Recent Observing Awards

None

## May Sky Calendar

|      |                    |
|------|--------------------|
| 02nd | Full Moon          |
| 10th | Last Quarter Moon  |
| 16th | New Moon           |
| 23th | First Quarter Moon |
| 31st | Full Moon          |

## OAS Meeting Minutes May 3rd, 2007

The **meeting** came to order at 7:35. No rooftop observing tonight. The Secretary Kim Moss-Allen read the **April minutes**. Gary Grimes motioned to accept, John Macy seconded and the minutes were accepted.

Also the Secretary reported that the **Non-Profit Corporation Biennial Report** due to the state of Nebraska every 2 years with \$20 has lapsed and was last paid in 1973. She requested and got the necessary paper work to get the OAS back into good standing. Past dues and late fees add up to \$344. After a short discussion, head slapping, and not a little laughter, a motion was made by Nina Baker to pay the fee. Ed Sikorsky seconded and it passed.

John Macy gave a short **Treasurer's report**, with income in April of \$400.95, expenses of \$96.37, balance of \$5376.01. Also, he says to ask him if you have questions about getting the magazine, Sky and Telescope. OAS rates (\$32.95) are \$10 less than standard rates. We had 8 guests, and 51 people total.

## Old Business

### Outreach

\*Sat., May 12, Club Star Party, Astropark, Weeping Water

\*Sat., May 18, Public Star Party, Mahoney State Park, dusk

\*Sat., May 19, Sidewalk Astronomy Day

### Club Telescopes

6" Dobsonian, AVAILABLE,

6" Newtonian, Bob Van Meteran

8" SCT, Larry Wilkes

13 " Dobsonian, Chris Jewell

Binoculars, 11x80, Bill Bond

**Observing and Awards**—no awards due at this time. Astropark use=5. Meteor shower coming May 4, 5, 6—best about 2 hours before dawn. Comet Lovejoy is near the head of Draco. Saturn is excellent right

now and Jupiter is rising about 11 PM. If you are observing Messier objects, those faint fuzzies of the Virgo galaxy cluster are at their best observing position right now!

**Vice President** –Site needed mowing, will contact our mower to get that done. Port-a-John has been serviced.

**MidStates Regional Conference—8,9 June--**Need help in registering guests, assisting treasurer. Door prizes and food are taken care of. At June meeting we will finish up gathering numbers, call in meals, etc. Conference rates are available for staying overnight (Regency-107<sup>th</sup> and Pacific).

**Nebraska Star Party—15-20 July—**Eric Balcom reported on preparations for Nebraska Star Party, door prizes now include 2 telescopes! Very beginner-friendly and family-friendly star party. Several catered meals—good food.

([www.nebraskastarparty.org](http://www.nebraskastarparty.org))

### New Business

**Guest Tim Gruber** was honored for his astronomy Science Fair project. He showed his project, explained it to the membership. It was about measuring sidereal versus solar days. He was presented with a Family OAS membership, a red observing light, planesphere, 365 Starry Nights, and \$50. Congratulations, Tim!

**Motion to adjourn** the meeting made by John Arthurton, seconded by Al Dorn. **Next meeting** will be some location, **June 1st, 2007, 7:30.**

Tonight's program: Because the presentation of our guest took some of the time, Mark decided to postpone the talk on **The Gas Giants: Jupiter and Staurn** until the June meeting.

Minutes by OAS Secretary  
Kim Moss-Allen

dark skies are a natural resource. [Light pollution is] very disturbing, because there's very little the average person can do about it."

That 'little,' however, eventually could amount to some significance, said Martin Gaskell, research associate professor in the department of physics and astronomy at the University of Nebraska-Lincoln. "I think that the main problem with light pollution is ignorance," Gaskell said. "I find that once you explain to people that the light shining upwards is unnecessary, they understand.

"People need to learn that there are good lights and bad lights," he said. "Good lights are ones that put just the right amount of light just where you need it. Bad lights put out more light than you need and put it where it is not needed." Many new neighborhoods, Johnson said, utilize bad lights — those that are aesthetically pleasing, such as old-time lantern fixtures, but cast unnecessary light into the sky.

Gaskell said homeowners could make better lighting choices by choosing fully shielded outdoor lights to illuminate only specific areas of the property.

City lighting, on the other hand, is a different story.

"The [cobra head light] is one of the cheapest city utilities and subdivisions can buy," Johnson said.

"But economically, they cost a lot of money."

Cities can more efficiently and cost-effectively light roadways with environmentally friendly fixtures, Johnson said — and Omaha, it seems, might be taking notice.

Dave Meier, HDR manager for the West Dodge Expressway, said his team took lighting and undue light pollution into consideration when planning the overpass. "In general terms," Meier said, "the fixtures, at least for the bridges, were a cut-off type fixture. They tend to put the light more directly down as opposed to having it spill out the sides. They're not nearly as visible from a side angle and not nearly as obnoxious as older fixtures."

Gaskell said Lincoln, too, has been examining its lighting schematics. "I was part of a diverse group of business and community people serving in 2005 and 2006 on a task force to see what could be done to improve Lincoln's outdoor lighting," he said. "It's my hope that Lincoln can take a national lead in the area of reducing bad lighting and being environmentally responsible."

In the meantime, both Gaskell and Johnson will continue to educate the general public on preserving the night sky.

"I think we ought to be particularly concerned about this in Nebraska because we have so much to lose," Gaskell said. "Nebraska is not a heavily populated state, and we have some gorgeous night skies, but

just a few lights can spoil the sky for many people.” Including, Johnson said, those who’ve never seen a true night sky.

“People from all over the country come [to see the night sky],” he said. “We had a couple from Manhattan attend the Nebraska Star Party, held annually at Valentine, who couldn’t believe that that was what the sky really looked like.”

For more information on light pollution, visit dark-sky.org, or visit omahaastro.com.

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### **MISSION STATEMENT FOR THE OMAHA ASTRONOMICAL SOCIETY**

The purpose of this society is to educate and enlighten society members and the public in the science of astronomy.

#### **SOCIETY’S OBJECTIVES**

Hold monthly meetings containing an educational content related to astronomy.

Encourage and train society members utilizing observing programs and lectures.

Provide outreach programs and events to private and public schools to inform and educate in the science of astronomy.

Provide outreach programs and events to the general public and civic groups to inform and educate in the science of astronomy.

Generate public goodwill

Hold social events to recognize achievements, preserve the morale, and social bonding for the society’s members.

### **GOALS OF THE OMAHA ASTRONOMICAL SOCIETY**

Goals are to be reviewed twice a year by the Executive Committee to see if they have been met, or to extend the due dates. Then, presented to the general membership for approval.

Check on the status of our Nebraska charter. Is it still in effect? If not in effect take steps to bring it up to date. Due date July 2007.

Investigate the need to obtain from the IRS **501(c)(3)**, as in United States Internal Revenue Code [26 U.S.C. § 501(c)(3)]. and if need to obtain 501-C3 status by end of CY 2007

Study the need to keep and maintain the Society’s observing site known as Astro Park by December 2007.

If Astro Park is to be sold, have it on the market by March 2008.

Expand the Society’s outreach activities in Sarpy County, Washington County, Council Bluffs Iowa area and Mills County Iowa area. By August 2008. Investigate the need to be chartered in the state of Iowa, and if needed, obtain tax-free status in Iowa by December 2007.

Inventory club’s observing equipment, and determine if telescopes, eyepieces, and other equipment needs to repaired, replace or upgraded by December 2007.

### **Stella Quiz**

**June 2007**

- 1. What is the brightest visible star (other than the sun) that we know has a planet?**
- 2. What is the significance of June 2nd and June 8<sup>th</sup>, 2007?**
- 3. How long is a season on Uranus?**
- 4. What is gravitational lensing?**
- 5. Pluto last “dipped inside” Neptune’s orbit in 1979. When did it emerge?**
- 6. Which constellation contains the stars Denebokab and Tarazed?**
- 7. The Crab Nebula (M1) contains a remnant of the star that made the nebula when it went supernova. It’s a neutron star that spins on its axis 30 times a second. What’s another name for this type of star?**
- 8. This constellation is about 907 square degrees, is on meridian June 15<sup>th</sup> and contains the star Mufrid. Which is it?**
- 9. This open cluster is visible near Leo, contains**

about 75 visible stars, is about 515 light years away and is about three times the size of the full moon. Which is it?

10. What's a nova outburst?

11. This constellation contains a small asterism known as the "engagement ring", a small ring of 7<sup>th</sup> and 8<sup>th</sup> magnitude stars just south of a brighter star, and it's on meridian in June and is about 256 square degrees in area. Which is it?

Lastly, do you prefer the answers to each month's astronomy quiz to be in this issue or in the next month's issue? Send an answer to [dallen@novia.net](mailto:dallen@novia.net) or 291-7887.

Kibbles For Noobs

By Fellow Noob, Bob Dunn

After slightly less than a year of active OAS participation I find myself astounded at the amount of valuable information stored in the heads of the more experienced members of our club. Especially when appreciated as a group, between them there's lots of experience that doesn't need to be relearned by us Noobs (or Newbies, neophytes, novices, whatever you want to call us). And all of our members, experienced or not, have been beyond gracious and generous with the knowledge they've accumulated.

So, what is the problem then? Simple. As Noobs we may not realize there's a question until after we've needed the answer. And our experienced members found the answers to the beginner's questions so long ago that they don't think about them anymore. They are now more obvious than obvious.

This brief article (and maybe more articles, we'll see how it goes) is a run down of a few of the questions I wish I'd known to ask before I needed the answers.

1) When collimating the secondary of my new Newtonian for the first time should I tip the tube to a horizontal position?

Good grief, Yes! There is nothing like the sinking feeling of spending hundreds of your hard-earned dollars, favor points with your spouse, and hours of precious time researching your purchase and then dropping an Allen wrench down the tube.

Well, maybe realizing the roller coaster you're riding on is broken, but that's all I can think of.

2) Will I do okay if I show up at an Outreach event, even if I feel like I don't know anything yet?

Definitely Yes! An Outreach event is a teaching event.... for everyone. Don't miss out on the opportunity to be taught with everyone else. I spent my first Outreach helping people find their way to the line, explaining what they were going to see (I knew because I asked Bill and Gary what was in view), and answering basic questions about telescope construction (i.e. Why does this telescope not look like the telescope at the toy store?). I learned a lot, including the fact that I knew more than I thought I did. My research was already paying dividends.

Check that someone with experience will be at the event as a leader. I still do this. Bring your telescope when you get one but bring yourself even if you don't have one.

3) How do I make up my mind what telescope to buy?

Borrow a club scope already! That's what they're there for. All of the efforts of all of the people who participated in all of the years of the club's existence up until now are fulfilled by the Omaha Astronomical Society having a place for you to go to observe and equipment that you can borrow for observing.

And ask questions. There are two kinds of people in Astronomy who want to talk to you more than anyone else. There are the people who are trying to sell you something and the experienced astronomers who've learned a lot of valuable lessons and want to share. So far, after eight months, no member of the OAS has refused to give me their best answer to any question I've asked, regardless of the "degree of difficulty". Don't be shy. They are your friends. They're certainly mine. And they don't charge for their advice. Then you can be more prepared when you talk to the people who will take your money.

4) How do we thank those people, and show appreciation for their efforts?

We can't, not directly. Like most favors you have to pay back by paying forward. Thank your predecessors by doing what you can for those who come after you. Maybe that's why I wrote this article....



## OAS Club Officers

|                              |                |                |                     |
|------------------------------|----------------|----------------|---------------------|
| <b>President:</b>            | Mark Weiss     | 291-5322       | mweiss4@cox.net     |
| <b>Vice President:</b>       | Gary Grimes    | (712)-527-3495 | b52crow@netzero.com |
| <b>Treasurer:</b>            | John Macy      | 991-5587       | ptmacy@doctor.com   |
| <b>Secretary:</b>            | Kim Moss-Allen | 291-7887       | dallen@novia.net    |
| <b>Program Chair:</b>        | Eric Balcom    | 491-3502       | ecbalcom@msn.com    |
| <b>Outreach Coordinator:</b> | John Johnson   | 333-5460       | jwjohnson@oppd.com  |
| <b>Stella Editor:</b>        | Mark Weiss     | 291-5322       | mweiss4@cox.net     |

### Answers to May's Astronomy Quiz

1. Jeff Cuzzi, Cassini interdisciplinary scientist: 'At Saturn, where there's a new ring, there's bound to be a moon.'
  2. Centarus is on 3 sides of Crux.
  3. The Boxer is Pollux (mag 1.1), and the Horseman is Castor (mag 1.6) and they are the main stars, beta and alpha respectively, of the constellation Gemini, the Twins.
  4. Barnard's star is closer to Earth than Sirius or Wolf 359.
  5. The universe appears to be about 13.7 billion years old.
  6. Ephemeris is a "collection of data about the predicted positions, or apparent positions of celestial bodies ....at various times in the future." If you are trying to figure out where Staurn will be tonight, or Arcturus or the ISS, you are using ephemeris.
  7. (-6) Magnitude negative six was comet McNaught's best appearance.
  8. This is the 'Eta Aquarid' meteor shower (peaking May 4<sup>th</sup>) and it is caused by the earth plowing through debris left by Halley's Comet.
  9. De La Rue developed the heliograph, which let astronomers routinely photograph the sun's surface.
  10. A face-on spiral galaxy is going to appear roughly round as if you are looking at a Frisbee from the top. An edge-on spiral galaxy, in contrast, may be described as a line, pencil or cigar shaped, because you are seeing it from the side, like viewing a Frisbee from the side.
  11. A Kerr black hole, named for Roy Patrick Kerr, rotates and a Schwarzschild black hole does not.
- Wasat is in the constellation Gemini and its 'Bayer designation' is delta Geminorum.

I welcome comments, questions, arguments etc.—Kim Moss-Allen ([dallen@novia.net](mailto:dallen@novia.net)) References: *Astronomy Magazine* May and June, 2007, Field Guide to the Night Sky, 1991, Facts on File Space and Astronomy Handbook, 2002

The STELLA is a publication of  
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#### ANNUAL MEMBERSHIP DUES

Regular/Family  
\$25.00

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Newsletter Only  
\$10.00

Send your check to:  
The OAS  
c/o John Macy  
P.O. 6257  
Omaha, NE 68106

#### 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.

Visit the club web site at:  
[www.OmahaAstro.com](http://www.OmahaAstro.com)

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