



General Meeting of the Omaha Astronomical Society
Friday, June 2nd at 7:30 PM
Durham Science Center, Room 169, UNO Campus
Program: See Page 3



Nebraska Star Party

Well it is almost time for the 13th annual Nebraska Star Party (NSP); whose theme this year is "Confront Your Triskaidekaphobia". Come to the 13th event and view M13. This year NSP will be held July 23rd - 28th at Merritt Reservoir in Cherry county, in western Nebraska. If you receive Sky & Telescope look on page 99 for an article on the Nebraska Star Party.

**June Club Star Party,
24 June, 2006
OAS Club Site, Weeping Water**

New members preparing to help out at the first Mahoney Public Star Party of 2006 setting up a Meade refractor (below), plus Clark Cheney (left) setting up his homebuilt truss tube Dobsonian



June Meteors?

Will the June Bootid meteor shower (June 26—July 2) pull a repeat of the show in 2004, well probably not, however due to the nature of meteor showers there's always the chance that something could develop. If there is anything worth seeing this year at least the moon will be favorable, as it will be new on the 25th.

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

Events and Stuff Section

June Meeting Presentation

Astronomy for Beginner

Observing Series #5 & 6.

“Finishing up Constellations - Ursa Major”

“Telescopes - Types, Applications,
Apertures, Costs”

New Members

None

Recent Observing Awards

None

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

Friday 16, last quarter moon
Saturday 17, last quarter moon
Friday 23, new moon
Saturday 24, new moon

Mahoney Public Star Parties

June 16, 2006

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

JuneSky Calendar

3rd First Quarter Moon
11th Full Moon
18th Last Quarter Moon
25th New Moon

Omaha Astronomical Society

May Meeting Minutes

Meeting called to order 7:37 PM. 2 guests, 40 people total.

Reports The Secretary read April meeting Minutes and motion to accept was made by Ed Sikorski, and 2nd by Howard Bohm. The Treasurer's Report indicated that in April we had income of \$250 and expenses of \$76.50, and a balance as of 4/30 of \$5,438.79.

Old Business

Outreach

Sat. May 6th, Hitchcock Nature Center, Crescent, IA 8 PM*

Fri., May 19th, Mahoney State park, Public Star Party, Golf Driving Range*

Sat., May 20th Club Star Party, Astropark, Weeping Water, NE*

Thur., June 8th NSP Planning Meeting

A new request was made at the meeting to support a Boy Scout Astronomy Merit Badge workshop by Mike Gallagher, 572-9411. Scouts will have their event at Cunningham Lake in Omaha, 31 May with rain nights of June 2 and 3. Also we discussed the events at Benson and Greta in April—both went well.

Observing?

If you are working on your Messier objects Virgo and Leo are high now. M51, Whirlpool Galaxy, is nearly straight up—try binoculars on it.)

Awards?

Pending. Also Deb has a new form on which to collect your information if you are working toward an Outreach award.

June Planet Observing

Mid States Convention Narrowing in on date. Important to avoid College World Series time frame.
Old SCT Telescope Sold.

New Business

Budget A member asked if the club was planning fund-raising because we had previously discussed costs and ways the club could cut them. No, we have no plans to at this time. We have done several things to save money, like get a corporate sponsor for our table at Earth Day.

Astronomy Hacks Club members can get discounts on their books.

Book Buying Service from the Astro League (AL.) As a member of the AL you can order the astronomy books you want at 10% less than cover price and no shipping.

AL's North Central Region has let us know that dues structures may change soon. Some groups are requesting the option to offer their members membership in AL separate from local membership.

Oceanside Photo and Telescope also offers 10% discount for members of any Astronomy Club.

Nebraska Star Party brochures are available from Eric Balcom and also info is on the website, www.NebraskaStarParty.org Also **Sky and Telescope** magazine will have a good article about NSP in the July issue!

Motion to adjourn was made by Gary Grimes and 2nd by Bill Bond. Next meeting will be Friday, **June 2nd, 2006.**

May Program Astronomy for Beginners Observing Series, #4: Presented by Eric Balcom

Spring Constellations and Finding Celestial Treasures in Them.

Respectfully submitted,
Kim Moss-Allen,
OAS Secretary

Let's start with the planet Mercury which will be visible this month, look for it in the west-northwest about 45 minutes after the Sun sets. This apparition will be one of the best for Mercury due to the fact that the planet reaches both greatest elongation from the sun (25 degrees on June 20) and its farthest point north of the ecliptic (7 degrees on June 1). On the first around 9 P.M. Mercury will shine at magnitude -0.9, and if look at the planet through a telescope you will a disk that is 78 % lit. Throughout June the phase shrinks a Mercury moves closer to the Earth.

Now lets look at Mars which these days is little to look at as it has dimmed to magnitude 1.7, and it's size is 4". Although on June 15th look for Mars in the Beehive cluster, also on that same night look for Saturn just to the cluster's southeast. Look for a close pairing of Mars and Saturn on the 17th as Mars passes just north of Saturn. By the end of June Saturn will be setting two hours after the setting Sun, so get your Saturn observing done early in the month before the ringed planet drops into the turbulent air on the horizon.

On the other hand or on the other horizon Jupiter will be found rising with Libra. Shining at magnitude -2.4 Jupiter will be easy to spot in the southeastern sky. While looking at Jupiter there are a variety of things to look at; for one look for the Big Red Spot and its companion Red Spot Junior. As always Jupiter's moons, Ganymede, Io, Callisto, and Europa will be putting on a different show every night. On the 2nd look for two moons on either side of Jupiter, while on the 26th look for a close grouping close to the planet.

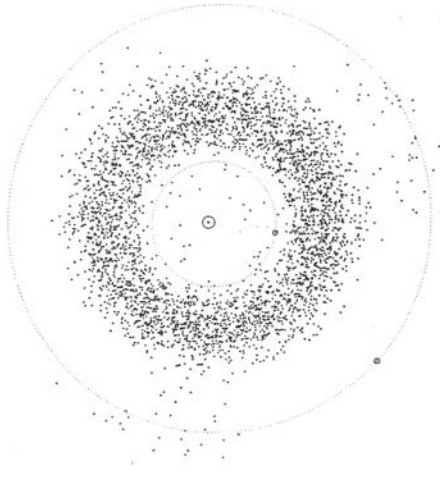
Now lets move on to Pluto, which will be at opposition on June 16, so it will be at its highest during the middle of the night. However at magnitude 14 you will need around a 10 inch or larger scope to be able to pick out this dim object, which will be hanging around in Serpens Cauda, look in the May issue of Sky & Telescope or the June issue of Astronomy for a finder chart. Uranus and Neptune while visible, will be late risers, and will still be very low on the eastern horizon in the morning twilight.

Venus will be visible in the morning twilight, on the 24th it will be close to the Pleiades in a pair of binoculars. Also remember that during June the Sun we will have the solstice on the 21st, at which time the Sun will cross its northern most point on the ecliptic.

Mark Weiss

Stella Quiz June, 2006

1. What is this a diagram of?



2. What is an AU?

3. What **constellation** contains the star Izar (actually a colorful double -- it's name means the "girdle" or "loincloth") and covers about 907 square degrees?

4. Which **constellation** is highest in September, has a star whose name means "the kid," and contains a globular cluster about 41,000 LY from Earth?

5. **M31** (NGC 224) used to be known as the Andromeda Nebula. It is the farthest object we can see naked eye. Is it about a) 200, 000 ly, b) 2 million ly, c) 12 million ly or d) 200 ly distant?

6. Which **constellation** first appeared on star maps in 1603, in Johann Bayer's Uranometria, is named for a bird and its brightest star is only magnitude 3.8? It's also less than 20 degrees from the southern celestial pole.

7. **T or F** A "constellation" does not actually refer to a figure made of lines connecting stars but instead is describing all the stars in a particular area.

8. **Who** said, "The heavens themselves,
the planets, and this center,
Observe degree, priority, and place,
Insisture, course, proportion, season, and form
Office, and custom, all in line of order."

9. Which planet's **escape velocity** is 5 km/sec as compared to Earth's 11.2 km/sec?

10. Some **planetary nebulae** are smooth and round but some have "handles" that look something like Saturn's rings. What are they called?

Astronaut's Golf Shot Pulled from Next ISS Spacewalk

By [Tariq Malik](#)

Space station commander [Pavel Vinogradov](#) will not smack a golf ball into orbit outside the International Space Station (ISS) during a planned spacewalk next week, NASA officials have said.

Vinogradov, commander of the station's [Expedition 13 mission](#), was [slated](#) to hit a golf ball into space during a June 1 spacewalk as part of an agreement between Russia's Federal Space Agency and the Canadian golf equipment firm Element 21 (E21) Golf Co.

"It's definitely not in this one," NASA ISS spokesperson Kylie Clem told *SPACE.com* of the golf shot. "We've been told that it's been pushed to the next [Russian] spacewalk."

Clem said a specific reason for the postponement was not given, though Russian spacewalk planners continue to work out the timeline for the upcoming extravehicular activity (EVA). During that spacewalk, Vinogradov and Expedition 13 flight engineer [Jeffrey Williams](#) are expected to don Russian-built [Orlan spacesuits](#) and install a new hydrogen vent line for the station's [Elektron oxygen generator](#), replace a camera on the outpost's railcar-like [Mobile Transporter](#) and perform other tasks.

The camera replacement was a late addition by NASA station managers, Clem said, adding that the U.S. activity does not appear to be a driving factor for the golf shot's move.

Clem said the golf shot is now scheduled for the next Russian ISS spacewalk, set for November, by [Expedition 14](#) astronauts Michael Lopez-Alegria and Mikhail Tyurin.

The golf activity is part of Toronto-based Element 21's publicity campaign to commemorate this year's 35th anniversary of astronaut Alan Shepard's [Moon golf antics](#) during NASA's [Apollo 14 lunar mission](#). Video from the event will be used in an upcoming commercial, and the golf ball to be hit is packed with transmitters so its flight -- expected to last up to three years -- can be tracked via Element 21's website.

"Just about every single record for distance in the golf industry will be shattered this fall when an astronaut will hit a golf ball into orbit around the Earth using an E21 golf club," Element 21 said in a statement earlier this month.

A gold-plated Element 21 six iron, several golf balls, an equipment bag, tee and specially-built platform

were [hailed to the ISS](#) alongside regular supplies by unmanned Russian cargo ships in anticipation of the orbital birdie.

Despite the event's postponement, NASA ISS officials will proceed with a safety review to ensure the golf swing or flying ball itself will pose no hazard to the space station. Russian cosmonaut [Sergei Krikalev](#), who commanded [Expedition 11](#) aboard the ISS, [participated](#) in previous orbital tests during his term aboard the station.

The Night Sky is For the Birds

By [Joe Rao](#)

SPACE.com Skywatching Columnist

If one were to do an informal survey of the constellations, you might get the distinct impression that the night sky was truly for the birds. There is a swan, an eagle, a dove, a crane, a toucan, a peacock, a bird of paradise and even a mythical phoenix. And over toward the south as night falls these late spring evenings is yet another: Corvus, the Crow.

Next to the famous Sickle of Leo, Corvus is probably the most striking star pattern in the spring southern sky for those living at mid-northern latitudes. It appears as a small, moderately bright quadrilateral-shaped pattern of stars; like a triangle whose top has been removed by a slanting cut.

Add a fainter adjoining star and the pattern resembles the battened mainsail of a Chinese junk.

Corvus can also be used to positively identify the bluish first-magnitude star Spica, in Virgo. Just follow the direction of Corvus' slanting top to the east (to the left) and you will soon arrive at Spica [\[Map\]](#).

Corvus is supposed to represent the unfaithful raven of the god Apollo. The bird was sent out with a cup for some water, but instead loitered at a fig tree until the fruit became ripe. He then returned to Apollo without the cup, but with a water snake in his claws, alleging the snake to be the cause of his delay.

As punishment, the angry Apollo changed Corvus from silvery-white to the black color that all crows and ravens bear to this very day. In addition, Corvus was forever fixed in the sky along with the Cup (Crater) and the Snake (Hydra), doomed to everlasting thirst by the guardianship of the Hydra over the Cup and its contents.

Crater, the Cup is a small and rather faint figure, which corresponds quite closely to its name. Its stars rather nicely outline a goblet, but unfortunately they're hard to distinguish when the sky is hazy or when there's a bright Moon in the sky.

A couple of weeks ago, we highlighted Crux, the famous Southern Cross. Interestingly, when the four-sided Corvus has reached its highest point in its

course across the sky, it stands directly above the Southern Cross, which is also attaining its highest point above the South Pole of the sky. But as we noted last week, even at its highest, the Cross remains out of sight below the horizon everywhere in the United States except for the Florida Keys. Thus Corvus reveals the position of a constellation whose name is known to almost everyone though invisible to many of us.

Lastly, we should mention one other star pattern, which can be found on some older star atlases sitting complacently on the end of Hydra's tail. It is Noctua, the Owl. Composed of nearly two dozen mostly faint stars, this night bird was created in 1776 by a Frenchman, Lemonier, in memory of the voyage to Rodriguez Isle of the famed French astronomer, Alexandre Guy Pingre.

Unfortunately for Lemonier and Pingre, the Owl is no longer recognized as an official constellation; its dim retinue of stars belonging now to Virgo and Libra.

This is sadly ironic in a way, since we already pointed out that there are a variety of different birds that inhabit the nighttime sky.

Yet the bird that is most associated with the night is not one of them!

Outreach Events Reminder

Any event where you do astronomy outreach can be used for two purposes, if it is at least 2 hours long. These events do not have to be club events, they do however need to be astronomy outreach either as individuals or as a group. You need to record these items for each event; *date, time started and ended, location, what you did, and number of people the event was for*. It takes just 5 of these two hour events to qualify for AL's Outreach Certificate. There are two other levels for this program.

The other purpose of these events is to log them in as events for our club with NASA's Night Sky Network (NSN). For NSN we need a bit more information; and to qualify for their quarterly prize drawing we need to use their informational toolkits. If you remember the green laser that we raffled off last year, well that was a prize we won by participating in the Night Sky Network. If you are interested in recording these type of events please contact Mark Weiss.

Mark Weiss OAS Vice President

Astronomy Quiz Answers

1. This is a diagram of the relative locations of the Sun, Mars (and it's orbit), Jupiter (and it's orbit) and about 5000 **asteroids**. Most of these asteroids are in a belt about 1.5 AU wide and closer to Mars than Jupiter. Notice the asteroids in Jupiter's orbit behind and in front of it.
2. AU means **astronomical unit** and is the average distance between the Earth and the sun, 149, 597, 870 km (about 92, 960, 000 miles.)
3. **Bootes**, "the Herdsman"
4. **Capricornus**, the "Goat" or "Sea Goat." Its alpha star (actually an optical double) is called Giedi or Algedis, meaning the kid and the globular cluster is M30.
5. **b)** This is the Andromeda galaxy at **2 million** ly distant.
6. **Apus**, the "Bird of Paradise."
7. **True**
8. William **Shakespeare**, in "Troilus and Cressida." I have yet to find "insisture" in a dictionary—I wouldn't doubt that it's one of those words he invented.
9. **Mars**. It's also the only planet to have a star named after it, Antares, meaning "Rival of Ares (Mars.)"
10. They are **ansae** and they project outward along the major axis of the nebula.

2009 with a completion date in 2012.

The 8.4-meter telescope will be 50 times as powerful as any survey telescope, with the capability to image the entire visible sky in just days, instead of years as current scopes can, said LSST project manager Donald Sweeney. He said the LSST will be able to map the visible sky rapidly and continuously, providing a new way to observe the universe. The observations will focus on astronomy and fundamental physics, including studies in dark energy and dark matter to understand why the universe is expanding. The project has received a three-year, \$14.2 million federal grant to design and develop the scope and has raised \$25 million in private donations.

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Powerful Telescope To Be Built In Chile

Associated Press
posted: 19 May 2006
09:45 am ET

TUCSON, Ariz. (AP) -- A mountain peak in Chile has been chosen as home for a Tucson-based telescope project that will be able to scan the entire visible sky every three nights.

The Large Synoptic Survey Telescope will be the world's most powerful survey telescope.

It will join the existing Cerro Tololo Inter-American Observatory, operated by the National Optical Astronomy Observatory, on Cerro Pachn, an 8,800-foot peak in northern Chile.

The LSST project, led by a Tucson-headquartered consortium formed by the University of Arizona, Research Corp., the National Optical Astronomy Observatory and the University of Washington, should be under construction by

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- ◆ 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.
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