

# "CLEAR SKIES"



NEWSLETTER of the CHAMPAIGN-URBANA ASTRONOMICAL SOCIETY, Inc.  
An affiliate of the Champaign Park District

December, 2005

## PRESIDENT'S MESSAGE

Hello . . . . and Goodbye Everyone,

This is my last message as President of CUAS. It has been an eventful year for us. This year we refurbished the 16.25" Cassegrain telescope and its fork, we are electronically monitoring the temperature of the observatory, we had a great response on the Junior Stargazers group, we have updated our by-laws to be more in tune with the times, and we have joined the Night Sky Network. We have been working with Allerton Park and have already planned three events for next year with them (a great place to use some of the Night Sky Network materials). We have even added a column to the newsletter – NASA Space Place. I think the connections we now have with JPL/NASA can only help to make our club much better but we have to use them. How we use them is up to the club. We held a poll to see what the membership wanted to do and we did some of that. Without input from the club membership, the club will not grow.

There is someone I want to talk about who almost always attends the meetings and is one of the more knowledgeable members of the club. He is always in the background, giving advice, listening to what is going on, trying to make the club a better one. He has been with the club since it began, is a past President, treasurer, and most likely has held all positions. Yes I am talking about Dave Leake, the guy that you can depend on to do the things that need to be done. I think he told me that he has done the newsletter for nearly 20 years or so. Every month he prods me to get the President's message done (just got email today on it). He is a great person and a great friend. I just wanted to take the time to say thanks to him. Thanks Dave! [Editor's note . . . don't mention it . . . if fact, I wish you hadn't!]

I have enjoyed my year as President and the support you have given me. I am sorry that I wasn't able to attend some of the meetings early in the year, but work does have to come first (then fun, then...). The officers for next year are Mike Lockwood, President, Guy Hampel, V.P., Phil Wall, Treasurer, Jeff Bryant, Secretary, and Dave Leake, 5th Director. Please give them all the support you gave me and more. I think Mike Lockwood will take the club in a different direction next year because his interests lie in a different direction.

Mike, Guy, Phil, Jeff and Dave, I wish you all the best in the coming year and I know you can make the club better than it was this year (even though I



### CUAS DIRECTORY:

Mike Matthews, President	586-5084
Mike Conron, Vice-prez.	355-5996
Guy Hampel, Secretary	352-3690
Phil Wall, Treasurer	352-5442
Jeff Bryant, 5 <sup>th</sup> Director	840-5251
Mike Rosenberger, Obs. Dir.	598-2254
Chris Pond, Webmaster	352-5426
Dave Leake, Newsletter Ed.	359-6644
Kevin Crump, CPD	398-2372

think we had a great year). Find your direction and forge forth, you have my support.

May you have clear skies the rest of your life,

Mike

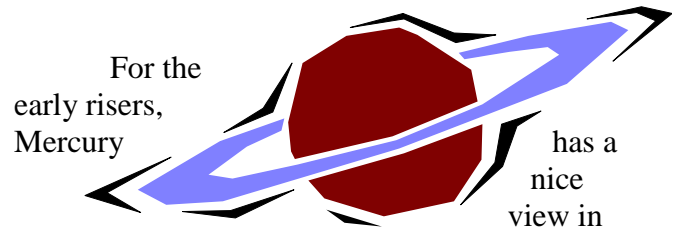
## LOOKING UP THIS MONTH

Mars and Venus are in the same sky now and the brightest things in the sky after the Sun. Check out the magnitude on Venus! At -4.6, this is about as bright as you'll ever see Venus. Too bad it's so low in the southwest at sunset. On December 4<sup>th</sup>, look for a lovely crescent Moon to accompany Venus. Things get interesting for Venus about halfway through December. After being in the evening sky since early April, Venus will take the plunge towards the Sun and not waste any time doing it either. Its set time decreases rapidly after holding at about 7:30pm since the end of September. Venus sets by 6:30pm CST by the end of the year. A telescope will show quite a bit, too. As Venus comes at us, you'll see the crescent get smaller but taller.

Mars had its opposition last month which means the Earth is now pulling ahead of it. Alas, the angular diameter will now decrease as well as its brightness. Still, you can easily see this pumpkin-colored planet high in the southeast at sunset. By December 10<sup>th</sup>, Mars will cease to retrograde and head back towards the east with respect to the stars. Eventually Mars will pass between the Pleiades and the Hyades star clusters. Mars is due south and very high in the sky at 8pm by New Year's. Can you still see a small polar cap?

Saturn rises just north of east about 30 minutes after Venus sets (7pm by New Year's Eve). Near December 19<sup>th</sup>, a telescope will show that Saturn has another "moon," which, in reality, is a 7<sup>th</sup> magnitude star. Binoculars will show Saturn coming to within about 3-degrees of the Beehive Star Cluster this month.

Jupiter is next, rising at 3:30am in mid-December. If you want to catch a good view of Jupiter, your best bet is to observe just before dawn when the planet is higher in the sky. Jupiter now leaves Virgo for Libra.



December, especially if you look early. The greatest separation from the Sun occurs on December 12, when Mercury rises at 5:30am, about an hour before the morning twilight begins. Look in the east-southeast, below Jupiter. A nice waning crescent Moon is situated to the right of Mercury on the 29<sup>th</sup>.

The potent Geminid Meteor Shower peaks on December 13<sup>th</sup> every year. The only problem this year will be bright moonlight in the sky. You'll still see the brighter meteors, but the big numbers will get washed out by the bright sky.

On the 23<sup>rd</sup>, one of the brighter asteroids (Vesta at magnitude 6.6) is just 12-arc minutes from the star Delta Geminorum. Check that one out with binoculars. And on Christmas morning, if you tire of opening gifts, drag the scope out and watch the daytime occultation of the bright star Spica, in Virgo. A thick waning crescent Moon will cover Spica at about 7:47am CST and then the star will reappear at about 9:06am. Given this is daylight, you'll need a telescope.

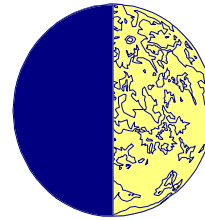
Lastly, on December 21, we'll have the winter solstice at 12:35pm CST. Happy Saturnalia, everyone! -DCL

Planet	Date	Constellation	Magnitude	Distance*	Apparent Diameter
Mercury	12/11	Scorpius	- 0.5	100.4	5.3"
Venus	12/15	Capricornus	- 4.6	33.9	45.7
Mars	12/15	Aries	- 1.1	60.4	14.4
Jupiter	12/15	Libra	- 1.7	566.6	33.6
Saturn	12/15	Cancer	+0.1	783.3	19.6
Uranus	12/15	Aquarius	+5.9	1891.4	3.4
Neptune	12/15	Capricornus	+8.0	2851.7	2.2
Pluto	12/15	Serpens	14.0	2978.0	0.1

\* in millions of miles from Earth

**Moon Phases:**

New	December 1, 30	January 29
1 <sup>st</sup> Quarter	December 8	January 6
Full	December 15	January 14
3 <sup>rd</sup> Quarter	December 23	January 22



## CUAS NEWS

**Congratulations** to our **2006 officers**, elected by secret ballot at the November meeting. They'll take charge in January. There will be a meeting of both outgoing and incoming officers at the Village Inn Pizza Parlor on Mattis Avenue at 7pm the day before the December meeting, December 7<sup>th</sup>.

President = Mike Lockwood

Vice-president = Guy Hampel

Secretary = Jeff Bryant

Treasurer = Phil Wall

Fifth Director = Dave Leake

Each year this executive committee appoints a newsletter editor, observatory director, and webmaster. Consider serving your club in 2006!

**Remember to renew your dues!!!** Most CUAS members are on a prorated dues system, meaning your \$15 membership dues (and dome key fee, if appropriate) are ***due this month!!*** Why not use the handy dandy form on the last page of this newsletter and renew today! Or you can bring your check made out to "CUAS" to the December meeting. Might you have magazines (Sky & Telescope or Astronomy) that need to be renewed? Consider taking advantage of the club's discount plans.

**2006 Calendars** . . . . . We still have a dozen or so Astronomy magazine 2006 calendars for sale. They'll retail for \$12 to non-members and \$10 to club members. Perfect for the holidays!! Grab one (or more) at the December meeting or give Dave a holler at 351-2567 to make arrangements to pick one up.

At the November meeting, Mike Matthews & Dave Leake introduced the club to NASA's "**Night Sky Network.**" As a new member of the network, CUAS will be sent outreach materials to use at both indoor events and at the telescope. The first kit is on extra-solar planets. We now have all-sky finder

charts for each month that shows how to find the stellar candidates for extra-solar planetary systems. Dave passed out some of the charts and showed the training DVD demonstrating how to use the materials in the kit. This will be a great thing to use at Skywatch sessions and at Allerton Park. We must do five public outreach events annually with the club meeting qualifying for the first one. For more information on the Network, go to <http://nightsky.jpl.nasa.gov>.

We only had about 25 people attend the November 6 **Mars viewing** at the planetarium. As fate would have it, the skies over C-U were cloudy until roughly 30 minutes before the session was to begin. That certainly held down the attendance. Mike Lockwood brought his Newtonian and Dave Leake set-up two telescopes for the patrons that did drive out. And Mars looked pretty sharp, too! Thanks also to Guy Hampel and Mike Conron for showing up to help with “crowd control.”

We now have an active chapter of **Junior Stargazers** at Bottenfield Elementary School on south Prospect in Champaign. President Mike Matthews attended a kick-off meeting in the school library in early November. Parent Kim Dalluge will be on-site coordinator but we will soon be planning some telescope viewing of the planets from the school grounds, soon.

For those with 2006 calendars, upcoming observing dates from the meadow at **Allerton Park** will be April 22, June 17 and September 16 in 2006. We’ll need a few volunteers to set-up scopes in the meadow on these evenings. We’ll also bring the Night Sky Network stuff to share!

#### **CUAS Treasurer's Report - 23 Nov 2005**

Income last 30 days (not counting magazine subscriptions)

\$105.00 - 7 membership renewals

\$30.00 - 3 key fees

\$60.00 - 6 calendars to members

\$195.00 - total

Outgo last 30 days (not counting magazine subscriptions)

\$413.00 - dome and equipment insurance (State Farm)

\$413.00 - total

Money assets

\$2160.91 - checking account balance

\$ 101.00 - petty cash envelope

\$49.00 - checks awaiting deposit

\$2310.91 - total

Philip J. Wall

**Light Pollution Report . . . . .** The Champaign lighting code has been distributed to interested parties in an effort to look at and amend the code and take those amendments to the Zoning Board of Appeals. The goals of the code are excellent, but the actual ordinance stops short of where it needs to go. If you’re interested in being part of this (and the more, the merrier!), contact Dave at [dleake@parkland.edu](mailto:dleake@parkland.edu) or 359-6644.

If you want to get your club news fast, please subscribe to the **Cuas-I email list**. Sometimes people will email and say they will be observing that night and will ask for people to join them. There is also news of new comets and possible auroral displays. To subscribe, just go to the Cuas-I web page at



We voted to have a Skywatch in January, despite this being close to New Year's . . . meaning we'll need some hearty volunteers to open the observatory!

January 12                    CUAS Club Meeting                    7-8:30pm                    Staerkel Planetarium  
Program to be announced. We'll also discuss some plans for the new year.

January 20                    "Skywatchers of Africa" opens                    8pm                    Staerkel Planetarium  
The newest production by the Staerkel Planetarium takes us to Africa to see how their many diverse cultures incorporated the sky into their society. This show was originally produced by the Adler Planetarium in Chicago and is made possible through a grant from the Staples Foundation.

January 28                    New Moon Observing                    7pm-?                    Observatory  
Our members-only session for the month in a dark sky. Dress warm and join us!

February 3                    "World of Science" talk                    7pm                    Staerkel Planetarium  
The planetarium welcomes back astronomer James B. Kaler to talk about something a little different. Art and science "collide" in an artistic look at the universe. Admission is only \$1 at the door.

February 4                    CUAS Family Skywatch                    7-9pm                    Observatory

February 9                    CUAS Club Meeting                    7-8:30pm                    Staerkel Planetarium  
We've reserved time at the February meeting to allow members of the public to bring in their new and old telescopes that just don't seem to work (or they can't figure out how to work them) and they need a little advice. Bring your collimation tools and expertise and learn something about telescope operation. If you know someone who has a telescope that they just can't get working, tell them about this night. Advice is free!

**CHECK OUT ALL CLUB EVENTS ON THE CUAS HOME PAGE:**

<http://www.prairienet.org/cuas> or <http://www.cuas.org>

## ODDZ & ENDZ FROM THE COSMOS . .

**Item:** Japan lands on the asteroid Itokawa . . . well . . . sort of anyway. The craft actually rested on the asteroid for 39 minutes before launching itself off the surface. The only problem is that the probe was *suppose* to collect some samples to bring back to Earth and that package didn't deploy. They try it again very soon.

**Item:** The European Space Agency has successfully launched the Venus Express mission, based on the successful Mars Express mission. At \$257 million bucks, it's a bargain! The probe was launched November 9 and will go into an elliptical polar orbit around Venus in April of 2006. Thanks to Russia for providing the launch vehicle.

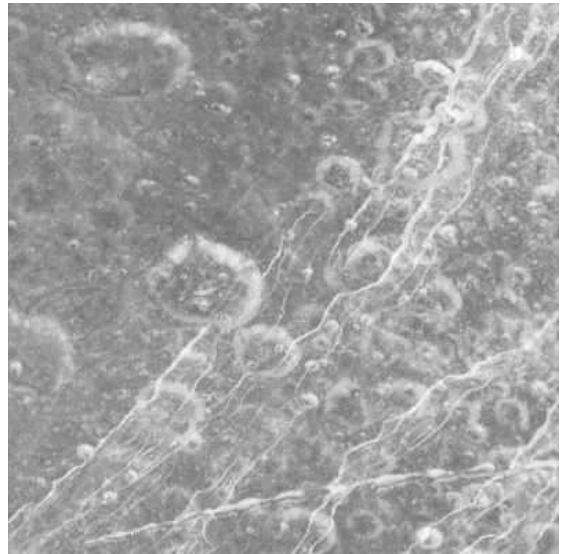
**Item:** Did you hear the one about the meteorite that hit Kansas? Well, not recently, but some dude with a metal detector found the stony-iron specimen . . . all 1400 pounds of it . . . in a southwestern Kansas field, near Brenham. It was buried 7-feet below the surface, but nevertheless retrieved.

**Item:** Have you seen the latest shots of the grooves on the moon Dione, orbiting Saturn? Wow! There are also these craters with dark floors but very bright crater walls. The *Cassini* probe passed by Dione on October 11 at a distance of 15,200 miles.

**Item:** Speaking of probes . . . . The *Spirit* rover passed it's one year anniversary on Mars last month . . .that's one Martian year (over 650 days)!! Not bad for a spacecraft intended to last for 60-90 days, eh?

**Item:** Copernicus found? Well, his grave anyway. An unmarked grave was excavated in Frombork, Poland, 180 miles north of Warsaw. A reconstruction of the face using the skeletal evidence seems to appear like the Copernicus we see in portraits. Our friend who placed the Sun at the center of the solar system lived from 1473 to 1543.

**Item:** Remember the huge burst of gamma rays that rocked the solar system one year ago this month? Well, it's happened again, this time with a 1/10<sup>th</sup> second pulse of energetic gamma rays coming from the Ursa Major region. In fact, the burst is believed to be a flare from a highly-magnetic neutron star ("magnetar") in the M81/M82 group of galaxies.



## MEMBERSHIP FORM

- Enroll me as a new member!  
 Membership renewal [attach mailing label]  
 Change of address only

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 Phone # \_\_\_\_\_  
 Email address: \_\_\_\_\_

Make all checks payable to:  
 "Champaign-Urbana Astronomical Society"

Circle all that apply:

Basic membership	\$15
Observatory key fee	\$10
<i>Astronomy</i> magazine renewal*	\$34
<i>Sky &amp; Telescope</i> renewal*	\$33
Donation	\$ _____
Total Enclosed	\$ _____

\*enclose mailing label

Detach and mail to:

C.U.A.S.  
 C/o Phil Wall  
 607 West Healey #11  
 Champaign, IL 61820

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The Champaign-Urbana Astronomical Society is an affiliate group of the **Champaign Park District**. <http://www.champaignparkdistrict.com>

**William M. Staerkel Planetarium** has public shows on Friday evenings in August. Call 217/351-2446 for more information. <http://www.parkland.edu/coned/pla>



**Champaign-Urbana Astronomical Society  
C/O William M. Staerke Planetarium  
Parkland College  
2400 West Bradley Avenue  
Champaign, IL 61821**