

"CLEAR SKIES"



NEWSLETTER OF THE CHAMPAIGN-URBANA ASTRONOMICAL SOCIETY, INC.
AN AFFILIATE OF THE CHAMPAIGN PARK DISTRICT

VOLUME 22
ISSUE 10

OCTOBER 2009

CUAS OFFICERS MESSAGE

BY BILL MARBLE

September was a really good month for observing. I mostly looked at Jupiter, because I really like look at it and am fascinated by the moons and how they sometime have two on each side of the planet and sometimes not. I then was able to observe Orions belt and a couple of Messier objects, M42 and M43. Of course I had to get up pretty early in the morning to see them in the southern sky, but the view is always well worth it.

An aside to this and last months meeting. I thought that WILL dropped the ball on their so called new member rewards. The film that was shown was, in my opinion, a film for children. I did not see many children there, and they were not the primary focus. I believe that a more appropriate program could have been presented. A better film could have been something like the history of the telescope, or maybe some of the films that the Discovery channel shows. Anyway, our September meeting went well, we discussed the lights at the observatory, and also our sign.



CUAS DIRECTORY:

Guy Hampel, President	352-3690
John Stone, Vice-Prez	337-1893
To be Named, Secretary	
Willard Brineger, Treasurer	356-5929
Mike Lockwood, 5 th Director	398-9778
Phil Wall	352-5442
Bill Marble	621-7882

LOOKING UP THIS MONTH

BY DAVID LEAKE

As the Sun sets in October (finally with a few spots on its face), Jupiter still rules our evening sky. It transits the meridian in the south just an hour after the twilight ends and then sets at 1:30am CDT. The planet is situated in the eastern reaches of Capricornus. Recently Jupiter has been undergoing retrograde (east to west) motion, but it will be stationary on October 13, then starting heading back pro grade (west to east) against the background stars. The Moon is about 3-degrees north of Jupiter on October 27.

Technically Mars enters the evening sky when its rise time is before midnight – that happens at the end of October as the rise time is about midnight on the 25th. Mars rises in the east-northeast and, early in the month, is about six degrees south of Pollux. Mars is heading eastward, leaving Gemini and heading for the faint constellation of Cancer. By Halloween, Mars will pass in front of the Beehive star cluster. Why not get out a telescope and give free looks to the trick-or-treaters. As Mars approaches us, the apparent disk will increase in size. This month that size surpasses 8 arc seconds – might you see a polar cap? The 3rd quarter Moon is near Mars on the evening of the 11th.

After this, our attention shifts to the morning sky where we find Saturn rising at about 5am CDT in the middle of the month. Venus is close behind and Mercury not long after that. In fact, on the morning of the 6th, the three are pretty close together with Venus being the highest, then Mercury, and then the fainter Saturn. By the 8th Mercury is 0.3 degrees south of Saturn. On the morning of the 13th, Venus is 0.6 degrees south of Saturn and then the crescent Moon joins the trio on the 16th. It's worth setting the alarm . . . well, I guess that's a matter up for debate, eh? We should mention that this view of Mercury is the best morning apparition of the year. Greatest separation from the Sun occurs on October 6 when it rises about 30 minutes before the morning twilight (about 5:30am) and it should be visible through about the 26th.

And if you're into getting up early, the morning of the 21st brings us the peak of the Orionid Meteor Shower. The meteor particles originate in none other than Halley's Comet. Though the comet is far away, we still hit the orbit every October at this time. Observers under dark skies may see 30 meteors per hour. Orion rises at about 9:30pm, though you'll see more "shooting stars" if you wait for it to get higher in the sky. The radiant point is near Orion's raised club. Closer to dawn is a better time. The Moon should be in a favorable spot, so why not check out this year's display. The meteors are entering the Earth's atmosphere just shy of 150,000 mph so the streaks are swift!

The magazines are reporting a Comet Christensen (2006W3) amongst the stars of Aquarius. It was thought that this comet may make magnitude 12 but it's already at 9 and could make 8, well within the reach of small telescopes. Look during the second and third weeks of the month when the Moonlight doesn't interfere. The comet is near Lambda Aquarii on the 16th. Finder charts appear in October's Astronomy magazine.

And for the die-hards out there . . . the LCROSS mission will happen during the morning of October 9, our time. A Centaur booster rocket will impact a crater near the Moon's south pole followed four minutes later by a satellite to measure what flies up from the impact. Though water molecules were recently detected in the lunar environment, the impact should be interesting. It is said you might be able to see the impact, though it will be getting light from the morning twilight in Central Illinois. It's probably best to google LCROSS and get an updated impact time. Report anything you might see, though telescopes are recommended over binoculars. Good luck!

MOON PHASES

Waning Gibbous Moon



1 st quarter	October 25	November 24
Full	October 4	November 2
Last quarter	October 11	November 9
New	October 18	November 16

MOON FACTS

- When a month has two full moons, the second full moon is called a [blue moon](#). Another definition of a blue moon is the third full moon in any season (quarter of year) containing 4 total full moons.
- From Earth, we always see the same side of the moon; the other side is always hidden.
- The dark spots we see on the moon that create the image of the man in the moon are actually craters filled with basalt, which is a very dense material.

CUAS NEWS

BY DAVID LEAKE

International Year of Astronomy update the park tour is now over, though we can obviously go back to any park we want to revisit. Oddly enough, nearly all of the Urbana sessions were clouded out with the exception of the Anita Purves Nature Center event, which was very well attended. Of the 15 sessions original scheduled, the following actually happen. The numbers are public attendance followed by attendance by club members:

3/30	Douglas Park, C	12 + 3
4/21	Eisner Park, C	5 + 2
5/4	Morrissey Park, C	18 + 5
5/17	Hessel Park, C	21 + 6
5/26	Millage Park, C	8 + 2
8/26	Anita Purves, U	25 + 10
9/22	Clark, C	12 + 3

A bit “thank you” to all who helped, though the sessions did occur according to plan. The plan was to have a group of club members sign-up for nights so one or two people did not have to do them all. This didn’t happen, which is very disappointing.

Light pollution update several weeks ago there was a European conference on light pollution called the “Symposium on the Protection of the Night Sky.” Details can be found at:

<http://www.lightpollution2009.eu>. Something we may want to investigate is happening in Sedona, Arizona, where their local IDA group is handing out “starry night certificates” to businesses who comply to standards. This might be a good way to raise awareness, if we can come up with some guidelines. See more at: <http://isedona.com/ThemedArticleDisplay.do?ContentRecordNumber=16391>. Lastly, a city council in Wales is trying to save some money by dimming streetlights. What a concept! <http://www.walesonline.co.uk/news/cardiff-news/2009/09/03/dimmer-switch-plan-for-street-lights-91466-24598482/>

Late news flash!the Department of Electronic and Computer Engineering (ECE) at the university has agreed, in principle, to allow a shield to be attached to the mercury vapor light situated northeast of the dome site. They have also said they are not going to pay for it. So we have some options. This will be discussed at the October meeting.

On October 3, the **Decatur Area Astronomy Club** will host their annual “Astronomy Jamboree” at Friends Creek County Park. This park is actually closer to Champaign than you might think as you head westward on I-72 and take the Cisco exit and then look for signs to the Friends Creek campground. The evening will have observing (weather permitting) plus activities for the kids and a program on Galileo by our own Dave Leake. Dave will concentrate on how astronomy clubs carry on the legacy of Galileo . . . and we’ll hopefully drum up some new members for our Decatur colleagues! You can attend for free and even come early, bring some food, and have dinner in the pavilion. *If you go*, be sure to get into the club drawing for door prizes (not the general public drawing) as Bryan Maple has arranged for some pretty nifty door prizes for those already practicing astronomy!

Fall star parties are before us! Note that most do require advance registration (in parentheses below) so if you’re thinking of going, check them out soon!

* Illinois Dark Sky Oct. 15-18 near Springfield www.sas-sky.org/main.html

Looking ahead to the **November meeting**, we’ll have a very special guest as a speaker. Dr. Carl J.

Wenning has spent his entire professional career in the Physics Department of Illinois State University.

Carl started at ISU in 1978 as planetarium director - a position he held until 2001. In 1994 he became director of the Department's physics teacher education program that is today recognized as one of this nation's biggest and best. He retired from ISU in 2008, but continues to work part time for the Physics Department.



Carl is an accomplished amateur astronomer, and a member of the Twin City Amateur Astronomers. He is probably most well known for his writings on the moon illusion. He has observed total solar eclipses from Bolivia and off the coast of Crete, and recently returned from a trip to Chile where he completed the Southern Sky Binocular and Telescope Club observing programs. He is a Astronomical League Master Observer, having completed ten of the association's observing programs. Carl received NCRAL's 2007 Region Award recognizing him as an amateur astronomer who "demonstrates extraordinary skill, generosity, and devotion to promoting amateur astronomy and support of the NCRAL events and goals." Carl is chairman of the NCRAL 2010 meeting

that will be held in Bloomington-Normal April 16-17. His talk on November 12 is entitled "The Life and Times of Galileo." Few people have an understanding of the complex milieu surrounding Galileo's trial before the Holy Office of the Catholic Church in 1633. In this presentation, our speaker will provide text and context of the work and trial that thrust Galileo into the international limelight and the pages of history.

Consider taking your **CUAS newsletter** by email only and save the club some money. By your request, we can email you a pdf file monthly instead of spending money on stamps.

Also remember that the club offers magazine discounts for both *Astronomy* and *Sky & Telescope*. If you are interested, contact treasurer Willard Brinegar.

We also have a **club library** that is stored at the planetarium. Any club member in good standing can check out materials. Thanks to Jim Licquia for his donation of the book, "The Next Step: Finding and Viewing Messier's Objects" by Ken Graun (2005). Remind Dave at the meeting to get out the books and any member would be welcome to check them out. Thank you, Jim!

Join the **club listserv** and get viewing information in advance! *NOTE . . . this is not the same list as before!!!!* We had to dump the cuas-l on prairienet since prairienet went belly-up. This is a yahoo group that you have to join. See the web site www.cuas.org and look for "email listserver" link on the navigation bar on the left.

Remember you can catch **NASA programming** daily from 7-9am, Monday through Friday from 3-5pm and Saturday and Sunday from 8-10pm on the Parkland College channel, PCTV. Club funds helped, in part, to bring NASA TV back!

The Staerkel Planetarium has acquired a **32-inch flat panel television** that will ultimately be mounted in the lobby. The hope is to bring the Hubble Space Telescope program "ViewSpace" to the Staerkel lobby. For more information, see: <http://hubblesource.stsci.edu/exhibits/self-update/viewspace/>

CUAS has been sent a new tool kit from the **Night Sky Network**, this one dealing with glass and mirrors. In fact, the kit includes what amounts to an optical bench! It's a good way to show how telescopes work to the lay public.

FALL STAR PARTIES are before us! Note that most do require advance registration (in parentheses below) so if you're thinking of going, check them out soon!

- * Okie-Tex Sept 12-20 Oklahoma panhandle www.okie-tex.com/
- * Prairie Skies Sept 17-19 (8/15) Kankakee www.prairieskies.org/
- * Astrofest Sept. 25-26 () Vana's Farm, Kankakee www.chicagoastro.org/
- * Illinois Dark Sky Oct. 15-18 near Springfield www.sas-sky.org/main.html

A note about the **September meeting**. There is a small change for the September meeting. During the 7pm hour, the Staerkel Planetarium will be offering a preview of the new IYA show called "Two Small Pieces of Glass" for new Friends of WILL. CUAS members can also watch the show at no charge *but you have to RSVP* to make sure we have enough seats. If we get more than 140, the planetarium may do another show at 8pm and CUAS could have their business meeting in the lobby. So if you plan on coming to the September meeting, just drop Dave Leake a quick email by 5pm on September 7. *Thanks!*

Want to put your name on the "Curiosity" **Mars Science Lab** when it is launched in 2011? If so, visit <http://marsprogram.jpl.nasa.gov/msl/participate/> and add your name to the list!

Consider taking your **CUAS newsletter** by email only and save the club some money. By your request, we can email you a pdf file monthly instead of spending money on stamps

Join the **club listserv** and get viewing information in advance! *NOTE . . . this is not the same list as before!!!!* We had to dump the cuas-l on prairienet since prairienet went belly-up. This is a yahoo group that you have to join. See the web site www.cuas.org and look for "email listserver" link on the navigation bar on the left.

TREASURERS REPORT

BY WILLARD BRINEGAR, TREASURER

As of 9/30/09

Assets*

\$4180.73 Checking account

\$4180.73 Total Assets

Income*

\$7.50 Dues

\$7.50 Total Income

Expenses*

\$ 0.00

*Note: Magazine subscription funds are not reflected in Income and Expense since they are simply sent on to the respective publishers.

As of 9/30/09, all received subscription payments have been sent on,so they are not reflected in the Assets category either.

OBSERVATORY NEWS

BY DAVID LEAKE



Small projects list for warmer weather we probably need to **scrape paint** again, both inside and outside. The inside looks pretty bad in the daylight! Thank goodness it's used in the dark! Also, new **tarp** for the 16-inch (no paper or plastic), cooling **fans** in the telescope, and a **vent** for the shed. If you're returning the 8-inch red Dobsonian telescopes to the dome, remember to try to store them horizontally to help protect the mirror coatings. We also need to strip the paint on the inside but, given the dust that would be created, it might be best to wait until the telescope is removed. Evidently no one showed up at our work day . . . do we schedule another one?

The infamous "**mow list**" returns, but this time with a twist! A million CUAS "thank yous" to new member Ray Cummings who lives near the dome AND owns a mowing service! Ray has mowed the lawn about 4-5 times at press time so we actually have not started the list below. However, as Ray's paying customers start calling, we will resort to the list if and when we have to! If you want on the list or removed from the list, contact Dave Leake. Immediately after you mow the lot, contact the next person so they can plan to check the grass height. There is a mower and gas in the shed. Allow a couple of hours to complete the job.

- | | | |
|---------------------|---------------------|-----------------|
| 1) Mike Rosenberger | 5) Guy Hampel | 9) Dick Robrock |
| 2) Dave Leake | 6) Willard Brinegar | 10) John Stone |
| 3) Mark Prather | 7) Audrey Ishii | 11) Bill Marble |
| 4) Mike Lockwood | 8) Wayne James | |



LOOKING AHEAD

BY DAVID LEAKE

September 10 CUAS Club Meeting 7-8:30pm Staerkel Planetarium
We'll preview the new IYA show entitled "Two Small Pieces of Glass" with the club meeting to come after the show. The show opens to the public September 11 at 8pm. **IMPORTANT:** See "Club News" for details!

September 18 "Fall Prairie Skies" opens 7pm Staerkel Planetarium

September 22 IYA Observing 8-10pm Clark Park

September 24	IYA Observing	8-10pm	Garden Hills Park
September 26	CUAS Family Skywatch	8-10pm	Observatory
September 28	IYA Observing	8-10pm	Centennial Park
October 2	“World of Science” talk	7pm	Staerkel Planetarium
Jesse Miller from the UI Department of Chemistry (REACT) and regular on WCIA in the mornings, will be in the dome to discuss the “Chemistry of Alternative Energy Sources.” Admission is \$1 at the door.			
October 3	Decatur Jamboree	7-10pm	Friends Creek Park
Join the Decatur Area Astronomy Club for their regular event at Friends Creek Regional Park near Cisco. The park is closer to Champaign than you might think and the skies aren’t bad! The speaker will be our own Dave Leake talking about “The Legacy of Galileo.”			
October 8	CUAS Club meeting	7-8:30pm	Staerkel Planetarium
October 10	Middle Fork Observing	8pm - ?	
October 17	New Moon Observing	8pm - ?	Observatory
October 24	CUAS Family Skywatch	7-10pm	Observatory
November 3	“World of Science” talk	7pm	Staerkel Planetarium
Our buddy Ed Kieser, WILL meteorologist, will be at the planetarium with some awesome tornado video!			
November 7	“Santa’s Secret Star” opens	7pm	Staerkel Planetarium
November 12	CUAS Club Meeting	7-8:30pm	Staerkel Planetarium
November 14	New Moon Observing	7pm - ?	Observatory
November 21	CUAS Family Skywatch	7-9pm	Observatory
Note: This will be our last official open house of the calendar year.			
November 27	“Rites of the Season” opens	8pm	Staerkel Planetarium
Given the new digital system that will (hopefully) be in place next year, dare we say this is “last rites?”			

BY BILL MARBLE EDITOR

Don't forget the lunar crash of the Lunar Crater Observation and Sensing Satellite mission (LCROSS) on October 9. NASA has changed the location of impact from Cabeus A to Cabeus proper. The reason being is that Cabeus proper shows the greatest concentration of hydrogen at the south pole. Apparently there is a small valley in an otherwise high perimeter ridge which will allow sunlight to shine on the cloud on October 9. The ejecta does have to fly higher to be observed, shadows cast by a high hill provide an excellent backdrop to see the impact. The LCROSS team decided that this new location provides the best possibility of seeing the impact. So we will see.

EXCERPTS FROM THE PLANETARY SOCIETY.

BY BILL MARBLE, EDITOR

THE ROADMAP TO SPACE EXPLORATION

This roadmap was created in a workshop with the Planetary Society and Stanford University, entitled "Examining the Vision: Balancing Science and Exploration. Held at Stanford in February 2008. the workshop gathered some 50 experts from a diverse range of space-related disciplines to discuss how the United States' Vision for Space Exploration and other important space and Earth science priorities.

Key elements of the Roadmap include:

- focusing on Mars as the driving goal of human spaceflight
- deferring humans landing on the Moon until the costs of the interplanetary transportation system and shuttle replacement are largely paid
- accelerating research into global climate change through more comprehensive Earth observations
- achieving a step-by-step approach of new achievements in interplanetary flight, including a human mission to a near-Earth object

What this means is that the Roadmap calls for "A new and flexible program, based on a series of important first-time achievements and an international commitment to exploration and discovery." International cooperation is strongly recommended both to reduce costs for any one nation and to increase public interest and support.

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 & Telescope</i> renewal*	\$33
Donation	\$ _____
Total Enclosed	\$ _____

*enclose mailing label

Detach and mail to:
C.U.A.S. Treasurer
c/o Staerkel Planetarium/Parkland College
2400 West Bradley Avenue
Champaign, IL 61821

CHECK OUT ALL CLUB EVENTS ON THE CUAS HOME PAGE:

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

"Clear Skies" is published twelve times per year
for its membership. [Circulation: 78]

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**