

# "CLEAR SKIES"



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

September, 2007

## CUAS OFFICERS MESSAGE

Well, it's been a fantastically busy August for me, and the beginning of September promises to be just as busy, but more fun. I have a couple of astronomy-related events to attend, and then things calm down. So, if this issue is late, it's because Bill was waiting for me to write this column.

Personally, I've found myself making a lot of mirrors lately, and I'm having fun doing it. I've mentioned at meetings that I will step down as President after the end of this year in order to make some more time for other activities, which will hopefully include helping plan and build an equatorial drive for the 16" Cassegrain.

So, if you're interested in helping out the club, consider running for a club position. For the club, it's vital that we have active members who can fill these positions. Lastly, fall is nearly upon us, and our best observing weather is nearly at hand. Get out and enjoy it!

Mike Lockwood



## CUAS DIRECTORY:

Mike Lockwood, President	398-9778
Guy Hampel, Vice-prez.	352-3690
Mike Conron, Secretary	355-5996
Willard Brineger, Treasurer	356-5929
John Stone, 5 <sup>th</sup> Director	337-1893
Mike Rosenberger, Obs. Dir.	598-2254
Phil Wall, Webmaster	352-5442
Bill Marble, Newsletter Ed.	359-6407
Jameel Jones, CPD	398-2550

## LOOKING UP THIS MONTH

Jupiter leads the planet parade as the brightest object in the southwest. It is technically in the constellation of Ophiuchus, not far above the star Antares. Early in the month, Jupiter reaches "quadrature," meaning a line from the Sun to the Earth to Jupiter makes a 90-degree angle. This means the Sun is hitting Jupiter at such an angle where the moons pop into and out of eclipse. Jupiter sets at 10:45pm CDT in the middle of the month.

Technically Mercury is in the evening skies with Jupiter. Greatest separation from the Sun occurs on the 29<sup>th</sup> but the angle with the horizon is bad and Mercury never gets very high in the sky. In fact, all month it sets in the twilight. If you feel ambitious, take binoculars to an unobstructed west-southwestern horizon and see if you can find Mercury less than a degree from the star Spica. They will be low!

Mars rises in the east-northeast just before midnight early in September. By month's end, this time decreases to 11pm. As Mars gets closer, it gets brighter (magnitude 0.0) and larger through a telescope. A gibbous looking Mars streaks across the constellation Taurus towards Gemini, coming to within a 1° of the Crab Nebula on the 16<sup>th</sup> and 17<sup>th</sup>. On the 4<sup>th</sup>, a third quarter Moon is situated right above Mars.

Venus rises in the east at 3:30am later in the month. Venus reaches magnitude -4.8 this month which is about as bright as it can get! So you can't miss it.

Saturn follows Venus but is to its lower left and next to Regulus in Leo. In fact, early in the month, they are less than a degree apart. The waning crescent Moon is just above the pair on the 9<sup>th</sup>. Look a half hour before the beginning of twilight.

On September 11th observers in South America will witness a partial solar eclipse. And the equinox will occur at 4:51am CDT on the 23<sup>rd</sup>. And if you feel pretty good about your observing abilities, try to find the 8.8 magnitude asteroid Pallas as it zips around the star 34 Pegasi, which itself is magnitude 5.8. On September 1, the asteroid is 0.2° east of the star. Check the next night and see if you can detect any movement. The asteroid, as the name implies, will appear "star-like." Good luck

-DCL



## ***Moon Phases***

### ***Waning Gibbous Moon***

1 <sup>st</sup> quarter	September 19	October 19
Full	September 26	October 26
Last quarter	September 3	October 3
New	September 11	October 11

If you would like to see the phases of the moon, past, present, and future log on to <http://aa.usno.navy.mil/data/docs/MoonPhase.html#y2007>

## ***Some interesting facts***

Here we go again. Poor Pluto, it is the Rodney Dangerfield of astronomy. It doesn't get any respect. Not only has Pluto been downgraded to a dwarf planet, even Eris is now bigger and better than Pluto. According to Michael E. Brown of Caltech and reported in Sky & Telescope. Brown and his crew reported discovering Eris, designated 2003 UB333, back in 2005. After a lot of calculations, it has been determined that Eris is more massive than Pluto. So it is no longer "King of the Kuiper Belt." You can read the full article in the September 2007 Sky & Telescope. I also found an article in September issue of Discover magazine.

## ***Members Corner***

This will have to do for a members corner. Dave sent this in. It was something he found that may be of interest to us.

September 19 "Seeing In the Dark" 7pm WILL Channel 12

This PBS show looks at the world of amateur astronomy. They'll also profile some amateurs who have made some interesting discoveries.

September 27 "Prairie Fire"

7:30pm

WILL Channel 12

One of the segments should be the one filmed several years ago on the our astronomy club. Get those VCR's ready! Or is it DVR's now?

The one big thing is that we're still not sure about a September program. Maybe something about the later summer and early fall constellations using the Zeiss star machine. How bout that? If anyone has any ideas, please bring them to the meeting on September 13<sup>th</sup> meeting.

Dave

## **CUAS NEWS**

The officer corps are looking into bringing in some **guest speakers** for some upcoming club meetings. Names that have been tossed around are astrophotographers Bruce Kaibal (from Chicago) and Dennis Percik or even Roland Christen from Astrophysics.

Is anyone interested in doing some observing from **Millikin University's observatory** atop their new science building? We can arrange a tour if we can get a group of a half dozen or so.

It was noted at a recent officer's meeting that the club owns several **telescopes** that aren't being used very much. This includes the 16-inch truss tube telescope, the 6-inch refractor, and the 10-inch Meade, all at the observatory. A telescope sitting unused is not good for a telescope! Please inquire!

We'd like to revisit the idea of discussing **astronomical topics** in ten minutes sort of like the basic astronomy talks at previous meetings. If you'd like to either talk about a topic, lead a discussion, or even ask a question, please do!

The **20<sup>th</sup> anniversary** plans for the Staerkel Planetarium have been announced in the college's fall "Live & Learn" guide. Of special note are lectures by astronaut and Danville native Joe Tanner, a talk by Smithsonian astrophysicist (and former U of I Astro Club president) Lynn Carter, and a talk by Education Professor Barbara Hug on "The Legacy of Sputnik." You're also all invited to a fundraiser for the planetarium's full-dome project. The gala is October 4 and we hope to have many astronomical items for a raffle. Tickets can be purchased through the Parkland Foundation and are \$30 each. We'll also open a new show called "Universary," exploring the major astronomical discoveries in the 20 years since the planetarium opened to the public. More info can be found at [www.parkland.edu/planetarium](http://www.parkland.edu/planetarium) and click on the "anniversary" link.

**Star Party Information** for the fall is as follows. Be sure to check the web sites soon as some require early registration. Did we miss any?

*Astrofest*, hosted by the Chicago Astronomical Society at Vana's Farm, is September 6-9. As this issue goes to press, registration info isn't available. <http://chicagoastro.org/af/index.html>  
*Illinois Dark Skies*, hosted by the Sangamon Astronomical Society at the Jim Edgar Panther Creek State Wildlife Area, will be September 13-16. Meals are available for purchase. Registration is \$45 per person although there are family rates. <http://www.sas-sky.org/main.html>  
The *Prairie Skies* party at Camp Shaw-Waw-Nas-See (the old Astrofest site) will be September 13-16. <http://www.prairieskies.org/>  
Also, though not a star party, the *Astronomical Society of the Pacific* will meet in Chicago from September 5-7. The emphasis is on education and public outreach. <http://www.astrosociety.org/events/meeting.html>

**TREASURERS REPORT**

CUAS Treasurer's Report for August 2007  
Willard Brinegar, Treasurer 2007

As of 3/29/07

Assets\*

\$ 111.00 petty cash envelope  
\$ 2540.26 checking account  
\$ 2651.26 Total Assets

Income\*

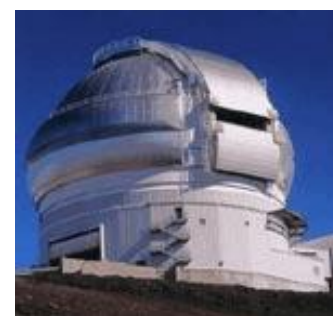
\$ 15.00 one membership renewals @ \$15  
\$ 7.50 one prorated membership  
\$ 22.50 Total Income

Outgo\*

\$ 0.00 no expenses paid

\*Note: Magazine subscription funds are not reflected in Income and Outgo since they are simply sent on to the respective publishers. As of 7/31/07, all received subscription payments have been sent on, so they are not reflected in the Assets category either.

**OBSERVATORY NEWS**



Spring projects . . . . 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, 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.

Mike Lockwood and John Pratt will soon look at the dome-mounted **16-inch scope's mount**, which is very tight in right ascension. The plan is to turn the shaft to a smaller diameter and then replace the two large bearings with five smaller ones. We'll be discussing this at an upcoming meeting. The project could cost \$1,000.

Do we want to bring back the **logbook**? If we have one, you'd have to remember to sign-in what you're at the dome, but it will help us determine how much the dome is used and allow us to estimate an annual attendance . . . which would come in very handy should we pursue a grant.

The infamous **mow list** has returned! If you'd like to be added (or deleted), let Dave Leake know. When you mow, let the next person know immediately. If you'll be out of town or can't mow, let the next person know ASAP so we don't lose control of the lawn out there. Thank you!:

- |                     |                     |                  |                    |
|---------------------|---------------------|------------------|--------------------|
| 1) Mike Rosenberger | 4) Audrey Ishii     | 7) Mike Lockwood | 10) Dick Robrock   |
| 2) Dave Leake       | 5) Willard Brinegar | 8) Mike Matthews | 11) Bob Rubendunst |
| 3) Mark Prather     | 6) Guy Hampel       | 9) Wayne James   | 12) John Stone     |
| 13) Bill Marble     |                     |                  |                    |



## LOOKING AHEAD

September 8	New Moon Observing	8-?pm	Observatory
September 13	CUAS Club Meeting	7-8:30pm	Staerkel Planetarium
September 15	CUAS Family Skywatch	7-10pm	Observatory
September 21	"Fall Prairie Skies" opens	7pm	Staerkel Planetarium
October 4	Planetarium Gala Event	5-7:30pm	Staerkel Planetarium
October 5	"World of Science" Lecture	7pm	Staerkel Planetarium
What's the latest on this "dark energy" craze? Does the evidence still support it? And what does it mean for our universe? Dr. Brian Fields is the speaker. Admission is \$1 at the door.			
October 6	Decatur Area Astronomy Jamboree		Friends Creek Park
Though this is not an official CUAS event, several members have gone in the past. The location is Friends Creek County Park, northeast of Decatur, near Cisco, just off I-72. A cookout begins the			

evening at 7pm, then activities for the kids, then a speaker, then observing. Dave Leake is this year's speaker.

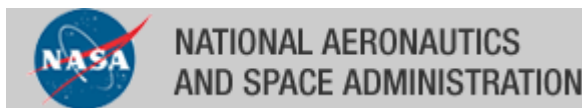
October 7                      Astronaut Joe Tanner                      7pm                      Parkland Theatre  
Shuttle astronaut and Danville native Joseph Tanner will talk about his latest space shuttle mission. Admission is only \$2 at the door. Note this is in the theatre, adjacent to the planetarium. It has double the planetarium's capacity.

October 13                      New Moon Observing                      8-?pm                      Observatory

October 19                      "Universary" opens                      8pm                      Staerkel Planetarium  
The planetarium's latest original feature details all of the amazing astronomical discoveries that have occurred in the first 20 years of the planetarium's history.

### **Other News, Viewing for September**

Take a look at [www.galex.caltech.edu](http://www.galex.caltech.edu) web site. There are some very interesting news items there. One such item that caught my eye was about the speeding bullet star. NASA's Galaxy Evolution Explorer spotted a star with a long comet like tail behind it. The star named Mira has been a favorite of astronomers for about 400 years. It is fast moving and a red giant. The tail was discovered while scanning the sky in ultraviolet light. They noticed what they call a gargantuan tail trailing behind the star. It appears the tail is about 13 light years long. An interesting article. To read more go to the above web site.



### *Astronomy Club Resources*

I think we did an article on guessing how old a person is by looking at them. Some people are pretty good at it. Carnival people for instance can usually come within a couple of years of telling how old a person is. But NASA has launched a space telescope called GALEX (Galaxy Evolution Explorer). This was launched to orbit around Earth in 2003. GALEX looks at ultraviolet light and can thus tell the age of stars and the universe, fairly accurately. Light travels at a predictable speed, 186,000 mps. Even light that is old and worn out travels this fast. So astronomers have been able to go back 10 billion years and tell how old stars and galaxies are. Read more at the NASA web site.

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

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

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

**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. Treasurer  
c/o Staerke Planetarium/Parkland College  
2400 West Bradley Avenue  
Champaign, IL 61821

**William M. Staerke 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. Staerkel Planetarium  
Parkland College  
2400 West Bradley Avenue  
Champaign, IL 61821**