

"CLEAR SKIES"



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

April, 2007

CUAS OFFICERS MESSAGE

Hope you're enjoying columns by other officers.
This month I have a short message too.

Welcome to Spring!

It's sure nice to be able to observe without freezing. While March's new moon observing session was quite chilly (but miraculously clear!), hopefully April's will be warmer and we will get a good night or two.

My main message this month is to remind you that we have CUAS member Bob Holmes doing the program for our April meeting. He will talk about his 32" F/4 telescope construction and the data he acquires with it. It's a talk not to be missed, given by one of the top amateur astronomers in the country, in my opinion.

Don't miss it!
Mike Lockwood



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LOOKING UP THIS MONTH

"April showers bring May flowers." How many times have we heard that? I love May flowers but lets hope the April showers "pick their moments" to allow us some time to observe the sky.

Any conversation about the night sky this month usually will begin with Venus. As the twilight gets later, Venus follows suit, setting later and later each night. On April 15, it sets at 11pm CDT in the northwest. It's the brightest thing in the sky next to the Sun and Moon. As Venus ventures eastward amongst the background stars, it will pass the Pleiades on April 11 and just "missing" the star 37 Tauri on the 14th. On the 19th, look for a waxing crescent Moon between Venus and the Pleiades. An older cluster, the Hyades (face of Taurus, the Bull) will be to the left.

Saturn is next, situated high in the sky (not too far from straight up) as the Sun sets. As you look near the zenith, you're looking through the thinnest part of the Earth's atmosphere, hence the images through the telescope are usually more steady. Thus, it's a great time to spy the rings. The rings are now fairly open . . . and you won't see them this tipped for another five years. Check 'em out! On April 24th, a first quarter Moon is right to the west of Saturn.

After a peek at Saturn, you'll have to wait a bit to see Jupiter, which rises in the southeast midnight on April 15. If you look either a week before or a week after, either subtract or add 30 minutes to the rise time respectively. If you see the head of the Scorpion rising, you'll know Jupiter is right behind! Compare Jupiter's color to that of red Antares, the heart of our Scorpion.

Mars doesn't rise until 4:30am and isn't the easiest thing to see. Best time to look is just before sunrise. The morning twilight begins about an hour after Mars appears in the east-southeast. A waning crescent Moon is to the right of Mars on the 13th and just below and to the left of Mars the next morning. Mars just misses Uranus on the morning of the 28th (0.7°) but this is very low on the horizon. Speaking of low, Mercury is even lower, but don't worry about Mercury. It will have it's best evening view of the year starting next month.

April's full Moon (April 2) occurs when the Moon is near apogee and thus the Moon will appear to be slightly smaller. The Moon is out of the sky for the annual Lyrid meteor shower, peaking during dinner time on April 22. However it's still light then, so you might check after it gets dark and into the morning hours. Despite the prediction, you usually see more "shooting stars" during the morning hours. Good luck!

-DCL

Moon Phases

Waning Gibbous Moon



1 st quarter	April 24	May 23
Full	April 2	May 31
Last quarter	April 10	May 10
New	April 17	May 16

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>

CUAS NEWS

Observing sessions added Friday, June 22 from 8:30-10:30pm in Hessel Park in Champaign and Friday, August 17 from 8-10pm in Meadowbrook Park in Urbana. More information on these free, public sessions will be available at a later date, but get them on your calendar now! We could use a few telescopes at these sessions!

Also CUAS telescopes have been invited to the **Middle Fork Forest Preserve** on Friday, April 13 from 7pm to midnight. The cloud date is the next night, April 14. The site is very dark! Recall that we did one observing session there not long ago by one of the lakes and the activity building. This time we'll go to a darker spot in the waterfowl region, north of the campground. Campers will be invited to observe with us. You are not required to camp there but you are welcome to. This was set-up by our own Bob Rubendunst, who is on the Forest Preserve Advisory Council. Jerry Pagac, the executive director of the CCFP, would like us to do more observing, if we wish. Camping isn't allowed at the Homer Lake area and we're usually kicked out at sunset. However, we may get permission in the future to stay later and observe from this dark site! Stay tuned. We'd love to have you at the Middle Fork, northeast of Rantoul and north of Penfield on the 13th. Take 136 out of Rantoul towards Penfield and look for the signs to Middle Fork.

Thank you to Phil Wall for managing our **web site** at www.cuas.org. Nice job, Phil!

If you know of a young lady in middle school who is interested in astronomy, be sure to check out the **GEMS** (Girls Engaged in Mathematics & Science) program being hosted by the University of Illinois this summer. There are evening sessions (two Thursdays per month) during April and May, plus a one-week day camp in June. For more information, see <http://gems.ncsa.uiuc.edu/> or contact Britt Lundgren at blundgr2@uiuc.edu. ASAP!

The Staerkel Planetarium will conduct **Boy Scout merit badge workshops** for the Astronomy Merit Badge. The nights are May 2, 8, and 17 from 7-9:30pm and the cost is \$5 per scout. In all cases you need only sign up for one night. Bring a flashlight covered in red cellophane and come ready to work! Note that advance registration is required! The deadline is the week before the workshop. Either use the form in the back of the Parkland "Live & Learn" brochure or use the abridged form on the planetarium web site. Both **girl scout badge** workshops have filled up! But a third night has been added on April 17 from 7-8:30pm. The cost is \$4 and you must sign-up using the form on the www.parkland.edu/planetarium web site.

Anyone want work on a **lighting ordinance**? Rumor has it that, near the new YMCA that they'll build near Zahnd Park (on the way to our observatory), they'll also build a Schnucks grocery store and a Target store! Hello?

Some other **calendar items** recall that CUAS is going to Allerton on May 5. Two days before, on May 3, the planetarium is teaming up with the Orpheum Children's Science Museum and WILL television for an "Investigate Space!" night for the kids. The free event will be held at Parkland in both the

planetarium and theatre lobby. Illinois planetarians will be meeting with colleagues from Wisconsin and Minnesota for a joint meeting at Yerkes Observatory on May 11-12. You need to be a member to attend their fall conference, but this is not the case for the state meetings. Anyone interested in going?

For sale: 6-inch f/8 Criterion reflector with completely redone optics. Equatorial mount and clock drive included. The optics were redone by the Tuesday night ATM group that meets at Mike Lockwood's home. Asking \$350. Contact Mike Lockwood if you're interested. *The telescope is currently in the planetarium lobby if you'd like to take a look at it.*

For sale: 10" F/6.8 and 10" F/5.5 truss-tube Newtonians, both built by me, with primary mirrors made by me. The F/6.8 is plate glass and about 1/15th wave, and the Pyrex F/5.5 is roughly 1/30th wave. They are not inexpensive, but if you're interested in a serious, high-quality telescope that will provide the best of planetary views, please give me a call (398-9778) or talk to me at a meeting. The F/5.5 is the brother to my 10" F/8.8, featured in the March S&T. Both scopes can be seen on my web site (<http://bi-staff.beckman.uiuc.edu/~melockwo/index.html>) under "Telescopes". I am willing to customize the f/6.8 a bit. - Mike Lockwood

BELOW ARE THE MINUTES FROM LAST MONTHS MEETING.

Minutes of CUAS Club meeting held on
Thursday March 8th, 2007 7:00PM
Parkland College, Staerkel Planetarium
2500 West Bradley Avenue Champaign, Ill 61820

TELESCOPE CLINIC REVIEW

The Telescope Clinic was determined to be a good success with 6 or 8 people showing up with their new scopes for instruction.

CLUB ITEMS OF BUSINESS AND DISCUSSION

Possible Viewing Events

03-17-2007

Saturday, members observing at the dome

03-24-2007

Saturday, Public viewing at the dome.

03-29-2007

Thursday. South Side Elementary School is having an Reading Night where Dave Leake will be showing the students how to read star charts. Guy Hampel has volunteered to have an observing session there if the weather permits. Any other members are welcome to help.

04-13,14-2007

Bob Rubendunst has made arrangements for observing at Middle Fork Waterfowl site just north of the main preserve area at Middle Fork, near Penfield, Illinois. This would occur on Friday, 4-13-07 with a rain date of Saturday, 4-14-07. Bob mentions how to get there:

“To get there from C-U, head east on I 74 to exit 197. Go north (Champaign county Route 22, aka County Road 2700E) about 19 miles. Go past the Middle Fork Preserve Entrance, and about 100 yards north of the entrance, is county road 3500 N. Turn left (West) onto County Road 3500N, and drive about 3/5 a mile east, then turn right at the brown forest preserve sign. There is an area where 10-20 cars could park.”

05-03-2007

Thursday. The Orpheum Children’s Science Museum and Parkland will host a get together with children’s activities at Parkland Staerkel Planetarium. The club might want to consider having an information table at the event. The table would need to be staffed and Dave Leake will be busy with activities in the dome so we would need other club volunteers. Some suggestions for this event might be:

- * It's day after full moon - have a scope outside for lunar viewing (though observing the full moon isn't much) and Venus and Saturn
- * Handout on what to look for when buying a telescope for kids
- * Some sort of kid's activity . . . Could set-up spectral tube and have kids look at them with the grating glasses
- * Could model moon phases. Could do a scale solar system. Could have star charts, etc, etc, etc.
- * Club brochures . . .maybe date of next meeting on them.
- * Displays? Dave still has the light pollution display.

05-05-2007

Saturday, Allerton Park Observing...more details to come.

October 2007

Staerkel Planetarium 20th anniversary will occur around October of 2007. CUAS should probably be involved in this somehow.

Other Items

Fork Mount. Bob Lozar has been emailed a note concerning the old fork mount’s disposition. No response yet. Most probably we will have it re-cycled...whatever that means ☺.

Mow List...The grass is growing.....time to get on the mow list.

PROGRAM FOR THE EVENING

The program was presented by Dr. You-Hua Chu, Phd of the University of Illinois. Her highly visual, very interesting and detailed presentation showed us views of the Helix Nebula (NGC 7293) in views other than visible light. What are called “multi wavelength observations”. The Helix Nebula takes on a much different view than we see in visible light and tells us much more about its structure.

There being no further business to be brought before the officers, the meeting was adjourned at 8:30PM

Michael T. Conron, Secretary

TREASURERS REPORT

CUAS Treasurer’s Report for April 2007
Willard Brinegar, Treasurer 2007

As of 3/31/07

Assets*

\$ 111.00	petty cash envelope
\$ 2627.41	checking account
<u>\$ 2570.41</u>	Total Assets

Income*

\$ 10.00	one calendars to member @ \$10
\$ 90.00	six membership renewals @ \$15
\$ 10.00	one key fee @ \$10
<u>\$ 25.00</u>	Donation
\$ 135.00	Total Income

Expenses*

\$ 0.00 no expenses paid

Assets*

*Note: Magazine subscription funds are not reflected in Income and Expenses since they are simply sent on to the respective publishers. As of 1/31/07, all received subscription payments have been sent on, so they are not reflected in the Assets category either.

OBSERVATORY NEWS

Regarding the **iron fork** in the shed . . . it will be junked soon. IF you would like it, notify an officer by April 15 or it's gone. *Last notice!*

Spring projects 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.

It's a bit early for the **mow list**, but just in case it warms up. This is basically last year's list. 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

April 6 "World of Science" talk 7pm Staerkel Planetarium
"Bird Flu and Other Pandemics" is the topic, featuring Parkland microbiologists Vikki Crneckovic.
Admission is \$1 at the door.

April 12 CUAS Club Meeting 7-8:30pm Staerkel Planetarium
Our guest this evening will be club member Robert Holmes, from Charleston, who will talk about his 32-inch telescope and the science he is doing with it. We hope to again have Dr. You-Hua Chu as our guest this night as well.

April 14 New Moon Observing 7-?pm Observatory

April 21 CUAS Family Skywatch 7-10pm Observatory
This is also the first of two National Astronomy Days.

May 3 "Investigate Space" 6-8pm Planetarium/Theatre
CUAS is invited to join the planetarium, the Orpheum Children's Science Museum, and WILL television for a free night for kids to have some fun with space exploration and astronomy. CUAS can have a table if they wish and maybe even do some observing.

May 5 CUAS at Allerton Park 8-11pm Allerton Meadow

Set-up time is 7:30pm with a talk at 8pm and then observing until 11pm from the very dark meadow at Allerton Park, west of Monticello. If you haven't been there before, go! There is a \$5 fee (to Allerton Park) for non-members.

May 10 CUAS Club Meeting 7-8:30pm Staerke Planetarium
President Mike Lockwood is in the process of trying to lure Ed Ting back to Central Illinois for a talk.
Stay tuned.

May 11-12 GLPA State Meeting Yerkes Observatory

May 12 New Moon Observing 8-?pm Observatory

May 19 CUAS Family Skywatch 8-10pm Observatory

June 14 CUAS Club Meeting 7-8:30pm Staerke Planetarium
Dave Leake will updates us on upcoming upgrades to the Staerke Planetarium.

June 16 New Moon Observing 8-?pm Observatory

June 22 Hessel Park Star Party 8:30-10:30pm Hessel Park

June 23 CUAS Family Skywatch 8:30-10:30p, Observatory

Other News, Viewing for April

<http://www.universetoday.com>

Monday April 2, 1889

Harvard Observatory's 13" telescope arrived at Mt. Wilson. One month later it went to Mt. Hamilton for astronomical viewing. This is where the largest telescopes lived from 1909 to 1948. There was a 60" for the first 10 years, then a 100" was installed. This was the largest solid piece of glass ever cast, it weighs 4.5 tons and is 13" thick.

Friday April 6, 2007 is the time to hunt for galaxies in Cancer. NGC2672 just northeast of Delta. It is only 12.5 magnitude so a large scope would have to used in order to see it well. What makes it worth looking at is its companion, NGC 2673, with a magnitude of 15. But this requires very large telescopes. I don't know for sure if even the clubs 16" would do it. But I think it would be worth a try.

Saturday April 7, 2007 look for Antares in the wee hours of the night. It will be very close to the moon. An occultation can be seen in some parts of the world.

On this day in 1991, the Compton Gamma Ray Observatory was launched. This CGRO looks at the sky in gamma ray photons. They go off the edge of ultra violet. You can't study gamma rays from earth because the earths atmosphere blocks them. And a good place to look for them it in Cancer because of the many quasars. Apparently you can see a quasar if you know what you are looking for. I don't so I won't even try to explain how to do it.

There will also be a small meteor shower this night, about five per hour. And the best chance is before the moon rises.

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>

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