

"CLEAR SKIES"



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

May, 2005

"PRESIDENT'S" MESSAGE

I would like to apologize to all of the club members for not making the last two meetings. The first meeting I missed was because of illness but the second was personal business. I want to thank Mike Conron. and Phil Wall. for helping me out those two nights. Thanks Guys!

If you are not on the email list I would like to encourage you to do so. A lot of information is exchanged between members using this list. One of the items that went across lately was that the reconfigured options on the 16 1/4" Cassegrain telescope (again) saw first light. I have yet to get out there to take a look see but I highly recommend that everyone get out and see how it is working.

I would like to thank everyone that worked updating the telescope and I would also like to take the time to thank the original people who worked on the telescope and dome. We need to remember that the idea for a dome and telescope happened in early 1989. Do any of the following names mean anything to any one? Jim Zimmerman, Paul Ellis, Liz Merdian, Avis Barker, Bob Januzik, Mike Svec, Cliff Maduzia, Bill Buddington, Mike Rosenberger, Dave Leake, Chuck Greenwood, Cliff and Dorothy Maduzia, Scott Hough, Tom Koberlein, Mark Bellon, Cliff Maduzia, Bricklayer Union local #17, Bob Lozar, Melanie Murphy, Lex and Jen Lane, Kathy Seely, John Kouka.

I know you recognize some of these names because they are still members of our club. These are some of the people that worked on the telescope and dome to give us what we have today. Take a look at <http://www.prairienet.org/cuas/observatory.shtml> for a history lesson. I think we may want to update that article to bring it up to date.

We need to remember that technology has changed a lot in the past 16 years or so when it comes to making telescopes. What was acceptable back then might be just okay today. So what I am getting at is that we should thank EVERYONE who had a hand in putting the dome up and making/fixing the telescope. Let's talk about how good our scope and dome are and not how bad this or that was. We have a great facility and telescopes and to everyone who worked on them I thank you.



CUAS DIRECTORY:

Mike Matthews, President	721-9500
Mike Conron, Vice-prez.	355-5996
Guy Hampel, Secretary	
Phil Wall, Treasurer	352-5442
Jeff Bryant, 5 th 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

It seems like a long time since we have had good weather for the public viewing sessions. I know I was out to one of them on a dark cloudy, and rainy night. I didn't expect anyone to show up and they didn't. Lets hope that the next public viewing session has clear skies.

Clear Skies

Mike

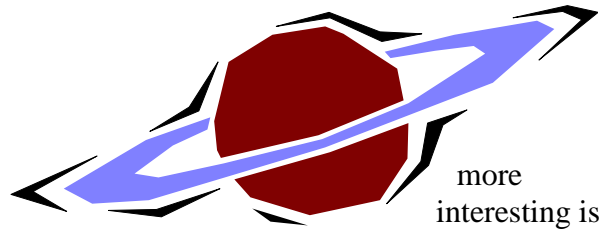
LOOKING UP THIS MONTH

Should we have some sort of prize for whoever can find Venus first? (My money is on Wayne James and that beautiful, low western horizon he has . . . not to mention the eagle eyes!) On paper, we should begin to see it this month, barely separated from the Sun's glare in the west-northwest. At sunset, its altitude will go from 7° to 13° this month, but 13° is just over one "fist" above the horizon! All month, Venus will set in the twilight. Use the Moon to help you. A very, very young crescent Moon is just to the right of Venus on the evening of May 8. The next night, a slightly thicker crescent is just above Venus. Give a holler on the listserv when you finally see it.

Saturn and Jupiter are easy this month. Saturn is about four "fists" high in the west at dusk, still dancing with Castor and Pollux in Gemini. Saturn will now "take off" (*at about as fast as Saturn usually goes) towards the Beehive Cluster in Cancer. At midmonth, Saturn sets at 12:30am CDT.

Jupiter is the brightest star-like object in the sky so you can't really miss it. Just in case you need help (?), a gibbous Moon is near Jupiter on May 19th and near the star Spica on the next night. The planet doesn't set until 4am. The magazines report something interesting at Jupiter near mid-May. On the morning of the 12th at 1:28am, the Jovian satellite Callisto will pass ever so close to Jupiter's south pole. Obviously this is a perspective thing, but see if you can see Callisto on this night and into the morning hours.

If we head into the morning sky, Mars rises at about 2:45am in mid-May. Our Earth is slowly but surely catching up with Mars in this great race around the Sun. The hot tip is that we'll catch Mars in November. The Moon is very close to Mars on May 31st. What may be



more interesting is the close passage of Mars (1.1°) to the planet Uranus during the early morning hours of May 15. Mars is just to the southeast of more distant Uranus. Can you find them both?

Lastly, Mercury is technically visible just before sunrise. Mercury has been in the morning sky since the beginning of April and it will be there all of May, too, but not very high. Mercury's rise time is always later than the start of morning twilight (5am on the 15th).

If you like hunting asteroids, go for Ceres this month as it reaches opposition in the constellation of Libra. At magnitude 7, you might catch it with binoculars with a dark southern sky, but it should be easy with a telescope. Trouble is, "asteroid" means "star-like" so it will be tough to tell. It's best to make a drawing and then look the next night for any movement. Ceres goes from west to east, just missing ($1/3^\circ$) the star Beta Librae to the north from May 2 to about May 4. On the 21st, Ceres will "miss" Delta Librae by only 1' (arc minute).

While we're in this area of the sky, we'll get to see an occultation of Antares on the morning of May 24th. The heart of the Scorpion will disappear behind the Moon at roughly 3am on this morning, reappearing behind the dark limb of the Moon about an hour later.

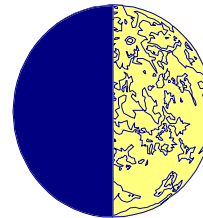
Lastly, the Eta Aquarid meteor shower peaks during the morning of May 6th. While listed in most field guides, the Eta Aquarids usually yield about ten meteors per hour, but if you happen to be out anyway, keep an eye out for them! Have fun! -DCL

Planet	Date	Constellation	Magnitude	Distance*	Apparent Diameter
Mercury	5/11	Pisces	- 0.2	99.4	6.3"
Venus	5/15	Taurus	- 3.8	156.0	9.9
Mars	5/15	Aquarius	+0.4	119.9	7.3
Jupiter	5/15	Virgo	- 2.3	439.4	41.8
Saturn	5/15	Gemini	+0.2	888.8	17.3
Uranus	5/15	Aquarius	+5.9	1888.4	3.4
Neptune	5/15	Capricornus	+7.9	2781.8	2.2
Pluto	5/15	Ophiuchus	13.8	2796.3	0.1

* in millions of miles from Earth

Moon Phases:

3 rd Quarter	May 1, 30	June 28
New	May 8	June 6
1 st Quarter	May 16	June 14
Full	May 23	June 22



CUAS NEWS

Junior Stargazers news three JS packets have been sent out so far; one to Tuscola (scout troop), one to Mahomet and one to Bottenfield School in south Champaign. The next task is to start putting JS activities on the web site. Dave Leake will be working with Phil Wall on that one.

Star party! We're good to go the first weekend in August, Thursday, Friday and Saturday night at a site about a mile south of Walnut Point State Park, south of Urbana. A map & directions will follow soon.

May 6 is the deadline for **workshop** submissions that will appear in Parkland's "Live & Learn" guide. Dave Leake has talked with the officer corps about doing a Marswatch activity for the upcoming opposition. The last close opposition brought observing to Meadowbrook Park and literally over a thousand people attended. This one will be during a colder time so it was thought that maybe a park wouldn't be quite as nice. So we'll have the observing just outside the planetarium. The club can sell T-shirts and other stuff (hot chocolate?) inside the planetarium lobby if desired. Any other workshops?

There are three **boy scout workshops** in May at the planetarium for the Astronomy Merit Badge. The sessions are 7-9:30pm on either May 4, May 10 or May 19. The registration deadlines are a week ahead of the workshop and registration is required. A booklet will be given to each participant that details all the requirements for the badge. The cost is \$5 per scout and leaders are free. Call Dave Leake at 351-2567 for registration information.



Treasurer's Report: As of April 25, Treasurer Phil Wall reports:

Income:

15.00 : 1 new membership

75.00 : 4 membership renewals (one was for 2005 and 2006)

20.00 : dome key fees

Outgo:

No activity this month

Current balances:

\$2494.79 : Checkbook balance:

101.00 : Petty cash envelope:

\$2595.79 : Total

Expected outgo remainder of April, May 2005

\$60 approx. for telescope parts and maintenance supplies

\$90 approx. for postage payment to Park District for Feb, March, and April



If you want to get your club news fast, please subscribe to the **Cuas-1 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-1 web page at <https://mail.prairienet.org/mailman/listinfo/cuas-1> and follow the subscription directions. Email cuas-1@lists.prairienet.org to post.

OBSERVATORY NEWS!

THE TELESCOPE IS UP AND RUNNING!! Thanks to Mike Conron, John Stone, Guy Hampel and others, the observatory is more! And the reviews are very positive. The declination axis easy to move (more friction is needed) but that's a minor thing. and Saturn have been impressive to say the least! Next, the talk digital setting circles.



Lockwood, Mike operational once is almost too View of Jupiter has turned to

There was also a request to have a phone listing of keyholders at the dome, maybe posted on the bulletin board.



The Mow List has returned! In fact, we're already into it. If you want to be on (or removed) from the list, email Dave Leake. Thanks to Mike Rosenberger who rolled the lot to get rid of some of the ruts in the ground, plus serviced the mowers (oil & blades), fixed the door to the shed, and changed the oil in the generator. As this issue goes to press, Dave Leake will probably mow the April 30th weekend.

1) Mike Rosenberger

4) Mark Prather

7) Wayne James

10) Willard Brinegar

2) Dave Leake

5) Jeff Bryant

8) Bob Rubendunst

3) Mike Matthews

6) Guy Hampel

9) Audrey Ishii



LOOKING AHEAD

May 7	New Moon Observing	8pm - ?	Observatory
May 12	CUAS Club Meeting Program to be announced.	7-8:30pm	Staerkel Planetarium
May 14	CUAS Family Skywatch	8-10pm	Observatory
May 19-21	National Science Olympiad The UI hosts the nationals for the first time!		University of Illinois
June 4	New Moon Observing	8pm-?	Observatory
June 9	CUAS Club Meeting	7-8:30pm	Staerkel Planetarium
June 11	CUAS Family Skywatch	8-10:30pm	Observatory
June 17	Summer Prairie Skies opens	7pm	Staerkel Planetarium
July 2	New Moon Observing	9pm-?	Observatory
July 9	CUAS Family Skywatch	9-11pm	Observatory
July 14	CUAS Club Meeting	7-9:30pm	Staerkel Planetarium
August 6	CUAS Star Party	TBA	Near Walnut Point S.P.
August 11-12	Perseid Party	10pm-?	Observatory
August 13	CUAS Family Skywatch	8-10pm	Observatory
August 20	DAAC Astronomy Jamboree	7-11pm	Friends Creek Park



CHECK OUT ALL CLUB EVENTS ON THE CUAS HOME PAGE:

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

ODDZ & ENDZ FROM THE COSMOS

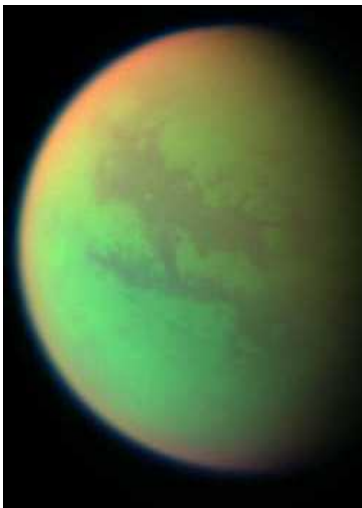
Item: The Hubble Space Telescope is celebrating a 15th birthday!
Launched in 1990 (can you believe it?), the telescope has revolutionized

the way we think about the universe. What's even better, the Hubble people are releasing a 15th birthday present to you! New shots of the Whirlpool Galaxy (M51) and the Eagle Nebula are being released. You can catch them on <http://hubblesite.org/gallery>.

Item: The Mars rover *Spirit* is still moving along in the Columbia Hills, a rise near the middle of Gusev Crater. Don't let the tabloids catch on to what's happening to the probe – they'd be all over it. The probe is losing power due to dust on the solar panel. . . . until a dust devil passes over the rover and cleans it off. Now the stuck wheel is working again. Go figure. Now *Spirit* has found some angled rock that is believed to be bedrock on Mars. The crater bottoms are basaltic lava, but the hills appeared to stay above the lava flows. And now the rover has even taken shots of close-by dust devils. Check out the frames at <http://marsrovers.jpl.nasa.gov>.



Item: On April 16th, the Cassini probe made one of its close fly-bys of Titan at Saturn. On this date, it skimmed 638 miles from the surface of the moon and found complex hydrocarbons in the upper haze of Titan. Some molecules had seven atoms of Carbon. Large molecules are expected to “rain” down onto the surface of Titan so to find them implies that they are being replenished somehow. It might possibly have something to do with Saturn's magnetic field. There will be three more fly-bys of Titan with the next coming on August 22. Stay tuned. In other Saturn news, the probe has found dust particles near the moon Enceladus. Does the dust come from the moon itself or from the outermost E-ring? If from the moon, it may be from suspected water volcanoes. On July 14, Cassini will pass as close to Enceladus than it will any other object during its four year mission . . . barely over 100 miles from the surface! Should be cool!



Item: The heaviest commercial satellite was just launched into a geosynchronous orbit. The 13,376-pound satellite is expected to last twelve years and is owned by . . . you guessed it . . . DIRECTTV. Bring on football!

Item: In the telescope department, CUAS member Robert Holmes is getting his 32-inch telescope in shape at his rural Charleston home. The mount is massive, as shown below, weighing 1000 pounds, but you can push it with your pinky finger! He's looking at a first of June completion date. The mirror will be done May 15 when will sit on a 27-point mirror cell. The robotic drive system is about 50% complete. Road trip?



Item: Sad to hear physicist Philip Morrison has died. He was 89. He helped design the first atomic bomb but was maybe best known for his narration in the “Power of Ten” movie. Does anyone remember the series called “Ring of Truth?” We could show an episode during a club meeting if need be. Though it didn't get the publicity of “Cosmos,” it was a wonderful show on the process of science.

Item: We now have about 160 extra-solar planets, but the big news recently was the announcement of the first “extra-solar asteroid belt.” The Spitzer Space Telescope people are talking about a dusty but dense asteroid belt surrounding a Sun-like star in the constellation of Puppis. It has about 25 times the mass of our own asteroid belt and is orbiting the star in roughly the same orbit as Venus does in our solar system. This is actually the third announcement of an asteroid belt beyond the Sun, but the first for a Sun-like star.

Item: Michael Griffin of Johns Hopkins University is the new head of NASA. He appears to be in favor of servicing the Hubble Telescope but wants to wait and see how the return to shuttle flights goes. He is in favor of a human visit to the Moon and Mars but *not* at the expense of jeopardizing the robotic programs, like the Mars rovers and Cassini. He also wants to get the shuttle replacement done early (a replacement vehicle is suppose to be in place and ready to fly by 2014).

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* | \$29 |
| <i>Sky & 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

“Clear Skies” is published twelve times per year for it 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>



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