The Night Sky

The Newsletter of
The Astronomy Club of Akron
www.acaoh.org

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Ramblings of the President - by Dave Jessie

Curses. Foiled again!

Rosaelena, our Assistant Secretary/Treasurer, and I just returned from ten days of incredible weather and food in Mexico City – the largest city in the world with a population of over 22 million people. We had a wonderful time, of course. Her entire family lives there in various suburbs as do family friends.

This year I had high hopes of finally getting a look at Omega Centauri – the largest globular cluster visible in either the northern or southern hemispheres. Since Mexico City is at latitude 19º - a full 22º south of us here in beautiful Akron, OH – it's at an altitude of 25º when it crosses the zenith instead of the measly 3º at maximum altitude here.

I've tried each of the prior three times we've been to Mexico in the past 4 years, each time thwarted by something or other. Once again, the weather was glorious and we had two nights planned at the homes of friends, each high on a mountain at over 9000ft altitude.

This time of year, the winds pick up and drive away the clouds and smog, which can oth erwise be quite bad. I'd planned ahead by bringing my laptop complete with various astronomy software packages, my green laser pointer, my large binoculars and enough desire to fill a stadium. Rosaelena's nephew has a 127mm Maksutov-Cassegrain telescope on an equatorial mount, so everything was in place!

Omega Centauri (NGC-5139) would be at its maximum altitude at around 1:45AM local time and everything was prepared. Clouds moved in unexpectedly. Night one of two wasn't going to happen. Two more days of fun, food and sightseeing occurred, then the last possible night when we could do observing finally arrived.

The weather was totally overcast when we left for our destination at the home of a doctor friend, on another mountain, so we decided to just enjoy the company and not dwell on missing the elusive object. We went to the good doctor's and had a ball with the party attendees. At around 1:30AM, I decided to go

Meeting This Month
Friday, April 22nd

This month we are happy to have Craig W. Williams as our speaker. Mr. Williams is an aerospace engineer with NASA Glenn Research Center since 1983. His specialty is advanced system propulsion technology.

The title of Craig W. Williams's presentation is 'The Cassini Mission to Saturn.' It will be a powerpoint overview of the Cassini unmanned interplanetary probe which was launched in October 1997 by the Glen Research Center. The roles of the NASA Glen Research Center and the speaker vis-a-vis this mission will be discussed.

Come One, Come All

We are planning a members only star party!
Where? Freeport, Oh
When? Saturday May 14th-
Maps will be available at the April 22nd general membership meeting.
Bring your telescopes and any refreshments you want. A grill will be provided for hamburgers and hot dogs. Weather permitting, this will be a good time to check out the sky from S-E Ohio.

Kind Regards,
Pete Flohr

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Activities Calendar

Club

April 9, Observatory Open House and
Star Party 8 PM AND
Messier Marathon
April 16, Astronomy Day 2005
April 22, Monthly Meeting 8 PM
May 7, ACA Astronomy Day Programs
at Akron Library and Observatory
May 7, Observatory Open House featuring Saturn
May 27, Monthly Meeting 8 PM

Celestial

April 8, New Moon
April 11, Moon 1.3 deg. S. of Pleiades
April 22, Lyrid Meteors
April 24, Full Moon
April 26, Mercury at Greatest W longation
May 8, New Moon
May 26, 2 shadows on Jupiter

The deadline for article submission is **the second Tuesday after each meeting**. All word processing files should be saved in straight ASCII text files or any version of Word to minimize import problems. We will not turn away **any** submission, as long as the article's subject is astronomy or a related topic. If you don't have access to a computer, don't hesitate to write something out long hand. As long as it is legible, I will slave over the keyboard and get it published.

PLEASE SEND IN YOUR ARTICLES!!!!

Send your articles, items for sale, and comments to:

Ray Hyer 725 Brewer St. Akron, OH. 44305 email rhyer@neo.rr.com

outside and look southward in the general direction of Omega Centauri. Guess what? It had cleared and the sky was beautiful! And ***NO EQUIPMENT!!***

Oh well, there's always next year. A while back, I commented that nothing in the world develops patience like amateur astronomy, and here's another example. Curses. Foiled ag

Speaking of curses, I know you won't be reading this before our planned reattempt at the Messier Marathon about which I wrote last month. We're going to be at the observatory before sundown this coming Friday, April 8th despite the fact that the weather forecast isn't looking very promising. I learned a Mexican expression this trip: (Continued on Page 3)
"Tláloc es malo" which is mut tered when looking upward and seeing clouds. It means that the Aztec rain god, Tláloc, is angry with us and cursing our attempts to see the sky by threatening rain. Exactly which one of you has ticked off Tláloc ***THIS*** time!?

Astronomy Day Festivities in Final Preparation - by Dave Jessie

Our observance of Astronomy Day is almost here…Saturday, May 7th, to be exact. What are we doing? We're going to be in two places at once. Talk about talent!!

Ray Hyer, our Astronomy Day Committee Chairperson, has made arrangements with the Akron Public Library to have a wonderful high-traffic location near the entrance from High Street. This affords us an opportunity to take astronomy to the masses in a venue MUCH more likely to generate interest than our old method at a local mall.

Questions like "how many aliens have you guys seen?" is likely to be replaced by sincere interest in the subject we hold so dear. At least that's our hope.

Also, Ray Paul and others are going to be at our observatory in Portage Lakes to show folks the tools we use pursuing our hobby. Jason Shinn has been assisting Mr. Hyer by printing astro photos from club members and making a beautiful display.

I personally want to thank Ray, Jason, Ray and everyone else that has contributed effort to this cause.

More discussion will follow at the next ACA meeting on Friday, April 22nd which is the regularly scheduled fourth Friday of the month meeting date. Signup sheets will be available to volunteer time at either or both locations. You might also contact Ray Hyer beforehand by phone or email. Thanks to everyone for your help.

Treasurer's Report: 3/1/05 - 3/31/05

Total Beginning Assets	$8,012.01
Income	
Donations	$4.44
Dues	$90.00
Interest on balances	$6.80
Magazine Subscriptions Paid to ACA	$94.90
Expenses	
Property & Liability Insurance	$(617.00)
Magazine Subscriptions paid by ACA	$(94.90)
Newsletter Expense (postage)	$(59.20)
Total Ending Assets	$7,437.05

Observatory Report

Just a couple of real short comments this month.

I've been by the observatory several times and noticed that the exterior lighting hadn't been turned back on after an observing session. So, just a reminder, to everyone who uses the facility, please remember to turn the exterior light at the observatory and the yard light at the park maintenance building back on when you are finished.

It looks like the weather has finally broken, so it's time to get back on the storage building project. I'll be looking at storage buildings for the next month or so. If you happen to spot one in the range of 8' x 10' please let me know. I'd like to try and have it in place by the end of May.

If you see this in time, please also remember the observatory program this Saturday, April 9. The last two were a bust due to weather so maybe we'll get lucky this weekend.

RAY PAUL
Observatory Director

What's the prime focus FOV with my LPI/DSI/ webcam/SLR/DSLR?

…from the Veep

Here's a question frequently seen on the various online astronomy forums. It's not nearly so mysterious as some of the common responses might make it seem.

It depends on only two variables, no matter what type of telescope or camera is being used. Armed with this information, one can quickly decide whether a given object makes sense for a given setup, and whether adding a Barlow or two will help.

Often folks ask what focal ratio they need to use to image planets, and are told F/20 to F/30 is best. That's not correct. The focal ratio doesn't enter into it - it's the focal length. A 100mm refractor will have a huge field of view at F/30 - a planet would be a tiny speck in the middle.

You'll need to know the dimensions of your imaging chip or film slide, and the focal length of the telescope. Focal lengths are published for pretty much every model you are likely to encounter so that's easy enough. It's worth being aware that the published figures are approximate, and in the case of designs with large ranges of focus accommodation, such as SCT's, the true focal length will vary with the length of any added hardware behind the telescope. The dimensions of the imaging chip are generally provided by the camera manufacturer. For a chart showing the sizes of the chips in some commonly used cameras, see the March issue of the "Night Sky" newsletter, available on the Club's website: www.acaoh.org .

The chips are rarely square, so it's normal to end up with two different dimensions for length and height - this is one reason that common attempts to equate a given camera to a given eyepiece view are suspect. The most common such approximation is to use the diagonal measure of the chip to calculate "magnification" and to then describe an eyepiece with the same magnification. Since the eyepiece is round rather then rectangular, this results in only a rough approximation - one on which I'd hate to base the planning of an imaging session. You can see by the (very) rough diagram below the difference between these shapes with the same diagonal measurement. The lighter gray area would be visible in an eyepiece but wouldn't be seen by the camera.

From this point it's just arithmetic or the use of commonly available charts or software. You can get a decent approximation of each dimension in arcminutes by dividing the length or width of the imaging chip in use by the focal length of the telescope, then dividing that quotient by .0003. As an example, I do some planetary imaging with my 12" Meade LX200 and a SAC-7 camera. The focal length of the Meade is about 3000mm. The SAC-7's chip is 2.7mm X 3.6mm. The longer dimension is thus about (3.6/3000)/.0003, or 4 arcminutes, and the smaller is (2.7/3000)/.0003, or 3 arcminutes. Inserting a 2X Barlow at its design distance will cut the FOV in half, thus doubling the size of the object on the chip - and doubling the required exposure time. The same camera in my ED80, at 600mm, would image a field 5 times larger in both dimensions, or 15 X 20 arcminutes, even though the focal ratio is very similar - F/7.5 compared to F/10.

The easiest way to get these results is probably the free program, "CCD Calculator", offered by Rod Wodowski and New Astronomy Press at:

http://www.wodaski.com/wodaski/pick_a_camera.htm

You can see the linear effect of focal length changes in the following picture, which is a composite of three shots taken using a Meade LPI imager on the Meade 12" LX200 at effective focal

lengths of approximately 1500mm, 3000mm, and 6000mm. You can see that Jupiter is nicely framed in the LPI's field of view (it has a chip a little larger than the SAC-7) when shot at 6000mm. Now the problem is to find a night when the seeing will support shooting at 6000mm!

John Crilly
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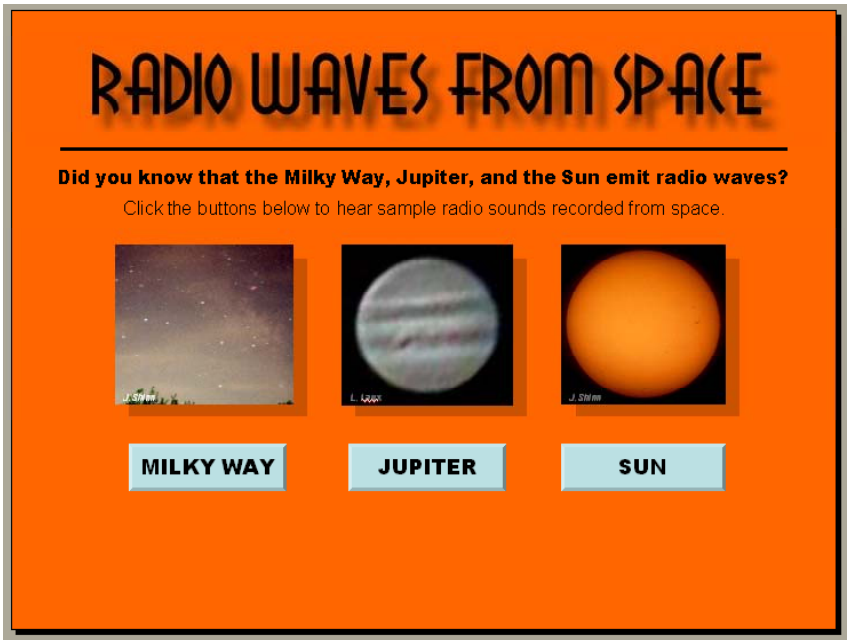
Minutes from the March 25 Membership Meeting

1.) ACA's general membership meeting was called to order at 8:00 pm
2.) Secretary's minutes were accepted from last general membership meeting.
3.) Treasurer's report was read and can be found in the newsletter.
4.) Observatory director Ray Paul had nothing new to report at this time.
5.) Public events calendats are still available at any general membership meeting why supplies last; or www.acaoh.org
6.) The next meeting will be April 22.
7.) Club Elections: President-David Jessie, Vice President-John Crilly, Secretary-Pete Flohr or Geoffrey Corney, Tresurer-Diane North, Assistant Secretary/Treasurer-Rosaelena Villasenor, Newsletter Editor-Ray Hyer or George Rufener
8.) Messier Marathon Friday, April 8th followed by an observatory open house Saturday, April 9th.
9.) Astronomy Day will be in May. This year we will be at two locations. The observatory and the Akron Public Main Library. Stay tuned for details.
10.) Membership dues are due in May.

ACA Secretary
Pete Flohr

The ACA would like to extend a warm welcome to Travis Smith, our newest member!

We are thrilled to have you with us and look forward to seeing you at ALL club meetings and events (despite how ***far away*** you live!)



Astronomy Day Program

As we approach the May 7 date, work continues to make this year's program one filled with visual delights. The image at the left is a slide from Jason Shinn's interactive Power Point that will allow the visitor to hear the sound s from radio emissions.

At the meeting on the 22nd we will ask members to sign up to be at the display to represent the Club. Please take the time to help us "take astronomy to the people".

Astronomy Day Planning Committee
Ray Hyer

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Yes! I want to become a member of the Astronomy Club of Akron
www.acaoh.org
(PLEASE PRINT)

NAME: _____ PHONE: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

EMAIL ADDRESS: _____

Astronomy Club of Akron annual memberships renew in the month of May.

ADULT (ages 18 and older) $30.00	JUNIOR (ages 12 to 17).....$15.00
ADDED ADULT member $15.00	FAMILY MEMBERSHIP $40.00

☐ I realize the full color version of *The Night Sky* newsletter is available for download by members from our web page at www.acaoh.org, but I would rather have the B&W version mailed to my address via USPS.