

## **The Night Sky**

### The Newsletter of The Astronomy Club of Akron

www.acaoh.org

Volume 29 Number 1

### **RAMBLINGS OF THE PRESIDENT**

The holidays are over. It's time to get back to our normal daily routines. Astronomically speaking, a 'normal routine' for Rosaelena and me is to go outside every clear (or not-so-clear) night and view with our binoculars.

I truly love binocular astronomy. It's so easy, and rewarding, too. While we have several scopes from which to choose, they all require a certain amount of effort to set up and take down - some more than others. On these cold January nights, nothing beats throwing on an extra layer or two (or three) of clothing, taking a quick look at a star map or computer 'desktop planetarium' to build a quick mental list of worthy targets, grabbing the binoculars and running out the front door for a starlight fix.

If you haven't ever done binocular observing, let me heartily encourage you to give it a try. You'll be amazed at the views presented by half-way decent binoculars on these crisp nights! Actually, binoculars can show many objects better than most telescopes. Asterisms, like Kemble's Cascade (extending from NGC1502), the Coathanger (CO 399), and the Pleiades (M45) look much better in the wide lowpower views provided by binoculars than in all but a handful of expensive rich-field telescopes. Another benefit to binocular observing is the ease at changing targets should those ever present NE Ohio clouds suddenly cover your current object of choice.

Once you get accustomed to the sky - and nothing encourages nor rewards this familiarity better than binocular observing - you'll find gorgeous star clouds of the Milky Way, interesting asterisms, resolvable open clusters, even galaxies(!) all over the sky regardless of date or time.

As a matter of fact, it's my opinion that the Andromeda Galaxy (M31) looked the best I've ever seen it while viewing through binoculars. M31 is over six full Moons wide and perfectly fills the field of 15-20x binoculars if your sky is sufficiently dark. What a sight it is, too. Much more like those gorgeous photos in S&T than the high power, narrow field, views in most any telescope.

As an example, the ACA's 14" SCT with the lowest power, widest field eyepiece can barely view ½ degree of sky - just the core of M31 can be seen with this instrument - not the sweeping angled view of a spiral galaxy that folks expect to see. Can anyone see this? You betcha you can - it takes a dark sky site and some 15 to 20 power binoculars, though.

This brings up a point - humans have two eyes for a reason, over and above the depth perception issue afforded by the parallax information provided to the brain by two eyes separated by a nose. While this is certainly an important aspect of vision, there's another reason to use two eyes for astronomical observing and I noticed this throughout my various bouts with eye difficulties over the years - the eye/brain can pull information out almost magically from input provided by two sources (left and right eyes).

You have to have noticed this when taking an eye test. You can read down to a certain line with your left eye, and to a certain line with your right eye, but when using both eyes, chances are excellent you can read at least one line better than either eye alone. Try it, it's true! How is this possible?

This is one of the benefits of viewing with binoculars, and I'm not talking about the 3D effect one gets from watching a sporting event with them since the distances involved when looking at the stars is considered infinite and the relatively tiny separation between your eyes can't possibly provide any 3D information. No, the effect is the almost magical eye/brain interferometry being invoked that combines the information being provided with both eyes.

Look at the Pleiades with binoculars using only one eye and focus as best you can. Note the number and clarity of the stars you see. Now, use only the other eye and do the same. Now use both eyes. Amazing, isn't it!? The additional information comes

### January 2007

by Dave Jessie

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Activities Calendar				
Club	Celestial			
Jan. 13, Open House and Star Party 6:30 pm	January 19, New Moon			
Jan. 26, ACA General Membership Meeting 8:00 pm	February 2, Full Moon			
Feb. 17, Open House and Star Party 7:00 pm				
Feb. 23, ACA General Membership Meeting 8:00 pm	February 17, New Moon			

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: Justin Phillips 402 Crystal St. Akron Ohio email phillipsaca@gmail.com

#### (Continued from page 1)

from the brain doing its magic processing with two sets of inputs.

What binocular viewing targets do I recommend for this time of year? As I just mentioned, the Pleiades open cluster is just magnificent as is the area near Aldebaran known as the Hyades (Mel 25) - or head of Taurus the bull. The belt stars of Orion and the Orion Nebula (M42) itself just below the belt are wonderful targets on a clear night. The Andromeda Galaxy (M31) is magnificent.

The area all around and through Cassiopeia and neighboring Perseus is chock full of targets, including the incredible Double Cluster (NGC869 and NGC884). The open cluster M44 in Cancer is a great target, too. Actually, there are too many to list!

If you have a star atlas, look for the open clusters in Messier's list - they're all fair game. Ooh! I almost forgot M38, M36 and M37 in Auriga located a couple binocular fields away from the bright star Capella. They're a bit dimmer than the other objects I've included, but not that tough, either.

While I'm a dedicated observer and love the big SCTs and heavy refractors, I have to admit I dearly love binocular observing. Give it a try - you won't be disappointed! Have I ever mentioned how much I love this hobby?

### **Observatory Report**

The Observatory Staff has generated an observatory budget for 2007. The budget was passed by the ACA Board in December. Below is the budget and a brief description of each item:

#### 2007 Observatory Budget

Total 2007 Observatory Budget	\$950
Wireless hand controller for 14" telescope	\$200
Roof repair	\$200
Roof cable & hardware	\$250
Miscellaneous maintenance (\$25/month)	\$300

**Miscellaneous maintenance** - This item includes small charges necessary to upkeep the observatory building, grounds, and equipment. Some examples are light bulbs, grease, fasteners, logbooks, privy supplies, and locks.

**Roof cable & hardware** - The existing roof cable has three significant tears and needs to be replaced before it fails. This budget item includes the cable and all necessary hardware to complete the replacement.

**Roof repair** - This item covers the cost of roof sealant to prevent water from entering the observatory building.

Wireless hand controller for 14" telescope - The wireless hand controller is not a necessity, but it will increase visibility around the telescope during slewing and provide a back-up controller if a failure occurs.

Ron Kalinoski

Treasurer's Report: 12/1/06 - 12/31/06 Steve Rohweder, Treasurer				
Total Beginning Assets	\$8,906.30			
Income				
Interest on balances	\$5.93			
Expenses				
Newsletter Expense Observatory Schedules	(\$9.00) (\$50.00)			
Total Ending Assets	\$8,853.23			

# Support your astronomy Club!

We've offered various Club-logo items in the past, including shirts and jackets, but the expense of stocking them and the delays of special-ordering them have proven to be more trouble to the Club than the resulting income was worth. Folks enjoy showing their loyalty and appreciation of the Club so we've tried various means of making logo merchandise available.

We've found a new, easy way to do it – and it's also the most convenient way for members to purchase these items. A third party (Cafepress) operates the store, takes and fills orders, and sends the commissions directly to the Club treasurer. This permits us to offer a much wider variety of items with plenty of size and color options – and never be out of the one size you were looking for!

The items can be ordered online through Cafepress, using any popular credit card. The website to use is <u>www.cafepress.com/acaoh</u>. The site is well-designed and easy to navigate so there should be no problems finding just the right item. On this page you can see a few of the items we are offering. Notice that many of the items also have an additional, different graphic on the back.























## Member Photos

Submit your astrophotographs to be published in the newsletter!

Mail prints or slides to the editor (address on page 2); or, if available, email digital images to: phillipsaca@gmail.com

High resolution, high quality JPEGs or PNGs are recommended.



Rosette Nebula—John Crilly

This morning [December 10, 2006], just before 7am EST, three planets came very close together in the sky. Mars, Jupiter, and Mercury appeared just above the horizon as the sun was rising.

Here is an image captured of that event from Canal Fulton, Ohio. In the triangle of little white dots, Mercury is seen at the top left, Jupiter the bottom left, and fainter Mars on the right.





Not to be outdone, the Moon and Saturn put on a show at the same time. In this photograph, the Moon appears passing very close to Saturn.

This is a composite of two images. One to expose Saturn a little longer in order to make it brighter. Another shorter exposure to dim the moon a little. Apparently I still over exposed the moon because you can't see much detail on it.

-Jason Shinn

### When You See the Southern Cross for the First Time... By

"Tom, are you able to go to Lesotho in early No-vember?"

Lesotho? Where the heck is Lesotho? I assumed it was in Africa. For the past two years, I have been involved in an extracurricular activity working on PEPFAR, a federal program designed to help support countries who have high rates of HIV infection with few resources. Most of the PEPFAR countries are in Africa, although a few, such as Vietnam and Haiti, are not. Anyhow, this call came to me from the American Society for Clinical Pathology in September. I had previously turned down 3 requests to travel to Ethiopia and Tanzania because of work and family commitments here. This time frame was free, however so I accepted the trip.

Lesotho, as it turns out, is a landlocked, independent country, totally within the borders of South Africa. As I looked at the map, I realized that, at the Lesotho latitude of over 30 degrees south, for the first time in my 55 years, I will have a full view of the southern skies. Hey, I'll be able to see the Southern Cross! A trip to Barnes and Noble to pick up the November Sky and Telescope which contained a southern star chart dimmed my enthusiasm; Crux

### By Tom Alexander

will be below the horizon for a good portion of the night. That's OK; I can get up in the middle of the night and check it out!

Nov. 5<sup>th</sup>; travel (and full moon) day. Following a cloudy overnight in Johannesburg, South Africa, I fly into Lesotho. I am greeted by clear, clean crisp mountain air! Lesotho has the distinction of having the highest low point of any country. The entire country is over 5000 feet in elevation. And, it's clear; not a cloud in the sky! O yeah, that pesky moon may get in the way.

That evening, I looked out my hotel window to see what direction I was facing- due south! Great. I had a balcony that I stepped out on. It took a while for me to get my bearings, as even familiar constellations were oriented in directions I had not seen before! For example, to my right was Sagittarius, with the teapot dome pointing down toward the horizon! The tail of Scorpio was at a strange angle! The brightest stars in the southern sky that evening were Canopus, in Carina, and Achenar, in Eridinus. Rigel Kent, and Centaurus were sinking below the horizon. The moon was too bright for any detail. The Magellenic clouds were faintly visible.



Image Source: http://hometown.aol.com/nlpjp/cru.htm

Two nights later, I woke up about 1:30, AM. I'm tired. Should I get up and look for the Southern Cross, or go back to sleep? You idiot! How often are you going to have the chance to see Crux? I got up, opened the patio door in my room and looked out. Wow!! There was the cross shaped constellation, with the long axis pointing vertically. Now I wish I had brought my binoculars; the Jewel Box and Eta Carinae nebulae would be visible, and the Magellenic clouds were much crisper than the previous night. But wait a minute. Crux is supposed to be the smallest constellation. Is this really Crux? It certainly looks like a cross, with the 4 corners well defined, and it's hanging in a way that would have inspired sailors 500 years ago. But it is fairly big. Hey, what's that small sideways cross shaped "box" to the lower left? Isn't there a "false cross"? Maybe that's the false cross. I'd better get out the chart. Well, the chart isn't any help; all of those stars are below the horizon on this chart. Maybe I should have picked up one of those Celestron Sky Scouts!

The next two nights were clear, and dark as the moon began to wane and rise later. The Milky Way formed a band parallel to the western horizon. One night I did venture out by the hotel pool to see the northern sky from the bottom of the southern part of the world. It took a little while to get my bearings; the great square of Pegasus was easy to identify, but which way is Andromeda?!

The positive identification of Crux had to wait until I returned home and could log onto my computer and pull up a star chart program. Reading my Sky Atlas 2000 was of little help. Crux is circumpolar in the southern sky, and is split on 2 of the Sky Atlas charts, so obtaining the proper orientation was not possible. In a nutshell, my first sighting was neither Crux, nor that of the false cross. Neither would have the long axis completely vertical at that time. Instead what I thought was the Southern Cross was most likely an asterism that may not have been as clearly defined in a darker sky. It turns out that I did see Crux, but it was the smaller of the two groupings. The false cross is formed from stars in the constellations Vela and Canopus, and was not something I saw. None of this has dimmed my enthusiasm for seeing the southern sky, however. The view of Canopus, Achenar, the Magellenic clouds and the unusual (for me) constellation orientation were worth the time and loss of sleep. A better view of Crux will have to wait for the next trip; I may be returning to Lesotho later in 2007. This time I WILL take the binoculars!

So, when I thought I saw the Southern Cross for the first time, I really didn't. Maybe that should be a title for a new song. Anyone have Crosby's, Still's, or Nash's email?

There is a nice photograph of Crux at this website: <u>http://</u> www.southernskyphoto.com/southern\_sky/crosses.htm



STEREO-B SECCHI/HI-1B image of comet McNaught More info: <u>http://ares.nrl.navy.mil/sungrazer/index.php</u> Jan. 11 2007 news item.

### Remember, General Membership Meeting Friday, January 26

In the Friday, January 5, 2007 issue of the newsletter of *The American Dialect Society*, the following was announced:

### "Plutoed" Voted 2006 Word of the Year

In its 17th annual words of the year vote, the American Dialect Society voted "plutoed" as the word of the year, in a run-off against *climate canary*. To pluto is to demote or devalue someone or something, as happened to the former planet Pluto when the General Assembly of the International Astronomical Union decided Pluto no longer met its definition of a planet.

See <u>http://www.americandialect.org</u> for the full press release, including all nominations and vote tallies.

### The Night Sky

Newsletter of the Astronomy Club of Akron

c/o Justin Phillips, Editor 402 Crystal St Akron, OH 44305-3116

To join the ACA, *or to renew your membership*, please fill out the form below, place in an envelope and mail to the address shown in the return address area of the form.

The Astronomy Club of Akron c/o Steve Rohweder, Treasurer 3981 Meadow Wood Ln Uniontown, OH 44685-7785					
Yes! I want to become a member of the Astronomy Club of Akron					
www.acaoh.org					
(PLEASE PRINT)					
NAME:		_ PHONE:			
Address:					
Сіту:	STATE:	_ ZIP:			
Email Address:					
Astronomy Club of Akron annual memberships renew in the month of May.					
ADULT (ages 18 and older) \$30.00 ADDITIONAL ADULT member \$15.00	JUNIOR (ages 12 to 17)\$15.00 FAMILY MEMBERSHIP\$40.00				
I realize the full color version of <i>The Night Sky</i> 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.					

Please be sure to enclose payment for the membership level desired.