



The Night Sky

The Newsletter of
The Astronomy Club of Akron

www.acaoh.org

Volume 28 Number 3

March 2006

Meeting Friday, March 24

Ramblings of the President

by Dave Jessie

Item 1 - Guess what? ACA election time has rolled around again! Come one, come all. Run for the office of your choice. Did I hear you say you don't want to run? Now what kind of organization would we be if nobody wanted to run for office?

The positions up for grabs are all the elected offices on your Board – President, Vice President, Treasurer, Secretary, Assistant Secretary/ Treasurer and Newsletter Editor. All other positions are appointed and approved by the voting members of the Board.

Honestly, the club is only as strong as the weakest link, just like every other organization. We want - no, we *need* - the best people to guide this organization in the proper direction while avoiding the pitfalls that always seem to show up at exactly the wrong time. I'm asking you to please consider running for an elected office. Come on, what are you waiting for?

Item 2 – Our Observatory open-house scheduled to occur on Feb 25 was cancelled by our Observatory Director, Mark North, due to the weather at the time he had to make the decision. As it turned out, the weather forecasts were in error and some observing occurred. I want to thank the members that showed up at

the observatory with their own telescopes and treated the attending public to some fine views.

As the schedule showed, the following Saturday, March 4, turned out to be a much better night – both cloud cover and temperature were far better than for the postponed Feb 25th event.

What a night we had!

Freddy Huffman counted, at one point, at least 30 members and visiting public in the observatory at the same time. Everything was perfect – temperatures in the lower 30s and dropping into the mid 20s, perfect cloud-free skies, equipment that performed flawlessly, eager members and public anxious to see the next object in our magnificent scope.

They were not disappointed! I lost count of all the objects Mark pulled in – M1, the Crab Nebula, was the best most of had ever seen it – even I could almost make out filamentary detail when usually it's just barely detectable. Amazing! M42, the Orion Nebula, left observers speechless with all the detail visible in the tendrils of the nebulosity. Of course, Saturn was awesome and most folks counted at least 5 moons as well as Cassini's Division and bands on the planet itself. Open cluster M44, right next to Saturn, was a beautiful sight as were the literally dozens of other objects seen.

What was my favorite? I had never seen star 145 CMA, known by some as the “Winter Albireo”. I heard about it recently from reading an international newsgroup called sci.astro.amateur (aka SAA). A poster known only as ‘Canopus56’ mentioned it as something well worth the time to find it. I was intrigued and mentioned it during the event. The crowd started chanting, “145 Canis Major!”, “145 Canis Major!”. Hey, we have a GOTO scope, let's take advantage of it! Uh-oh, there's no “145 CMA” in the database of the scope.

I had my laptop and used the freeware program I mentioned last month to do a search. Found it! I yelled the right ascension and declination across the room to Mark and he punched in the coordinates and the scope ‘whirrrrrrr’ right to it! Beautiful! It DID look exactly like the famous double-star Albireo at the head of Cygnus the swan – a favorite summer object. How was it different? The component stars are about 20% closer together than Albireo's and the colors actually looked more intense than those of Albireo. It turned out to be one of the favorite things we saw that night – made even more special by the fact that none of us had ever seen it. How could something that
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Activities Calendar

Club

March 18, 7:00 pm - Outreach program at the Observatory for Wadsworth elementary students, parents & teachers. **Bring your scope!**

March 24, Monthly Meeting 8 pm - "Proper Method of Cleaning Optics"

March 25, Open house at Observatory 7:30 pm

April 1, ACA Dinner 7:30 pm

April 22, Open house at Observatory 8 pm

April 28, Monthly Meeting - Elections 8 pm

April 29/30 - Messier Marathon at Observatory

Celestial

March 14, Full Moon

March 20, Spring begins 1:26 PM

March 29, New Moon

April 1, Moon in Pleiades

April 8, Mercury at greatest elongation

April 13, Full Moon

April 18, Venus & Uranus 18' apart

April 22, Lyrid Meteors

April 27, 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:

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

Minutes of the ACA General Membership Meeting on Friday February 24, 2006

1.) Guest speaker for February was Mr. David Richards from the Hoover-Price Planetarium in Canton. Mr. Richards' presentation included a brief history of the Hoover-Price Planetarium and its inner workings. His presentation was well received. Mr. Richards has also invited the ACA for a tour of the Planetarium and a chance to "control" the universe. Member Jason Shinn is doing presentations there on a regular basis.

2.) The business portion of the meeting began at 9:00 pm and lasted 1 hour and fifteen minutes.

3.) Observatory schedules for 2006 are available at membership meetings, the observatory, and on our website.

4.) The club's new Optima digital projector has been a great addition for the club.

5.) The next general membership meeting will be March 24, 2006.

6.) The next meeting will be a demonstration on how to properly clean optics. Please bring your eye pieces, binoculars, and corrector plates for hands-on experience.

7.) The 2006 nominating committee has been formed. If you're interested in running for office, please contact Jeff Kreidler (Chairmen), Greg Crenshaw, Freddy Huffman or Jeff Haren. Positions available are as follows: President, Vice President, Treasurer, Secretary, Assistant Secretary/Treasurer, and club newsletter *Night Sky* Editor, .

8.) The 12.5" f/8 reflector club scope has found a new home

Treasurer's Report: 2/1/06 - 2/28/06	
Diane North, Treasurer	
Total Beginning Assets	\$7,257.23
Income	
Interest on balances	\$6.15
Dues	\$120.00
Magazine Subscriptions	\$65.90
Book Sales	\$35.00
Donation	\$30.00
50/50 Raffle	\$44.00
Expenses	
Newsletter Expense	\$(25.20)
Dues prorating	\$(60.00)
Magazine subscription	\$(32.95)
Total Ending Assets.....	\$7,440.13

thanks to Mr. Scott Horstman. Scott will build an observatory for it on his property in Chatham, Oh (near Lodi). Scott has invited members to come and use the scope in its new home. The scope was donated to Mr. Horstman by a vote of the membership.

9.) ACA used scopes are for sale. Contact trustees Freddy Huffman, Tom Mino and/or Jeff Haren.

10.) Messier Marathon 2006 will be Saturday, April 29th/Sunday April 30.

11.) The membership voted to have the 2006 edition of the ACA Dinner at the Golden Corral (Arlington Rd.) on Saturday April 1st 2006 at 6:00 pm. All members, family, and friends are welcome. The cost will be approximately \$11.00 per person to be paid at the door.

NOTE: the time had to be moved back to 7:30PM since the restaurant could not accommodate us at 6:00PM.

12.) Mark Kochheiser revealed plans of the State of Ohio to build new facilities not far from the observatory in Portage Lakes State Park. Mark also spoke of costs approaching \$4000 to rebuild the 'Planet Walk' with a possibility that 80% would be covered by grant money. Heated discussion followed.

ACA Secretary
Pete Flohr

FOR SALE: CELESTRON BINOCULARS 20X80 DELUXE. SEEN LIGHT FOUR TIMES. ASKING \$275.00 CONTACT CARL HERVOL 330 497-7047.

SOLAR OBSERVING

I keep saying it's a great time to be involved in amateur astronomy. The equipment available offers both more features and better optics for the money than ever before. Solar observing is one of the interest areas that benefits from this. Amateur astronomers have a wide variety of choices available.

Solar observing gear generally displays images in either unrestricted bandwidth (referred to as white light observing) or in narrowly restricted bandwidths (usually in wavelengths near the Hydrogen-alpha or Calcium-K absorption lines). Although there are many affordable methods used to obtain white light displays, there are relatively few systems readily available for narrowband Solar observing. Broadband (white light) Solar observing is the most economical method. It provides nice views of sunspots and occasionally plage. Narrowband observing brings out much more detail; Ha filtration permits viewing prominences on the Sun's limb as well as flares and other surface phenomena. Observing near the Calcium-K line provides an even better view of energetic surface activity, but doesn't do well on prominences.

OBSERVING THE SUN IN WHITE LIGHT

Probably the oldest and simplest method used for broadband solar observing is the projection method. This consists of placing a white screen near the eyepiece of a telescope and causing an image to be pro-

jected from the eyepiece onto the screen. The primary advantage of this scheme is expense; no filters are required. Other advantages include a natural color display, and the ability to display the image to a group of people at once. The primary disadvantage is reduced safety; any energy left within the telescope or eyepiece from light not passed through will be converted to heat. For this reason, only perfectly collimated, simple doublet refractors with simple eyepieces are appropriate for this use. I don't recommend this method; today we have much better and safer alternatives available at a very modest cost.

Another very old method is the use of a Herschel wedge. Again, no external filters are used and the image displayed is faithful to the true colors of the Sun. Again, a simple, well-collimated refractor is recommended. The Herschel wedge replaces the star diagonal normally used. Its purpose is to deflect most of the Sun's energy via a waste port and to permit only a safe portion of the light to reach the eyepiece. A high-quality wedge of this type has recently been made available by Baader Planetarium. Although some purists prefer this method to any filter system. I would not recommend it to any but the most experienced Solar observers; there's simply too much that can go wrong and the result could be terrible.

The most popular and economical way to observe the Sun is to use your existing telescope and eyepieces of whatever type you prefer, with the addition of a prefilter at the entrance to the

telescope. This filter passes only a tiny portion of the light available into the telescope. Two types of such prefilters exist; the aluminized glass filter and the film filter. The glass filters are generally considered more rugged, as the film looks (and is) fragile and is subject to tears or pinholes. The film filters available today permit the viewing of finer detail, at the cost of introducing an unnatural color to the image. I prefer the film type. Both types are available in either full-aperture or reduced aperture. The full aperture permits the highest resolution of which the telescope is capable, so long as the total energy introduced into the telescope doesn't cause heating effects. These, while not dangerous in any way, will degrade the image. For this reason, I recommend reduced-aperture filters for use with telescopes larger than 6". Both glass and film filters are available from most astronomy dealers at a cost of from \$50 to \$125 or so, depending on aperture. **BE SURE TO INSPECT** whatever filter will be used before each observation session to ensure that it's safe to use.

NARROW BAND SOLAR OBSERVING

The most popular narrowband solar observing equipment restricts the passband of incoming light to within one Angstrom of the Hydrogen-alpha absorption line, which is in the deep red end of the visible spectrum. This permits observation of prominences at the limb of the Sun, as well as more energetic flares and some other surface phe-

nomena. There are two necessary components - a blocking filter to keep excess energy out of the system (and the observer's eyes) and the narrow-band filter, usually in the form of an etalon. The etalon can be either at the input end of the telescope (if it's a refractor) or at the output. Dedicated instruments are available or filter systems may be acquired to use with existing telescopes. The systems most commonly used today are made by Thousand Oaks Optical or Coronado Instruments. Costs range from \$500 for a ready-to-go but small

(40mm) Coronado PST to upwards of \$10,000 for a narrow-band system with a 90mm aperture.

Observing in a narrowband region near the Calcium-K absorption line (at the violet end of the spectrum) has been gaining in popularity lately. It permits highly detailed images of surface details and flares. Coronado Instruments makes the two most popular dedicated Ca-K telescopes. Costs range from \$500 for a Ca-K version of the PST to \$3000 for a 70mm aperture telescope.

BE CAUTIOUS!

Whatever Solar observing setup you use, be wary of accidentally exposing yourself or others to the unfiltered rays of the Sun. One common mistake is a failure to remove or mask a finder-scope while installing a filter on the main instrument. Always inspect a Solar filter both to ensure that there are no flaws and to make certain that the filter is firmly attached and can't fall off.

John Crilly
3-5-2006

President's Ramblings Continued

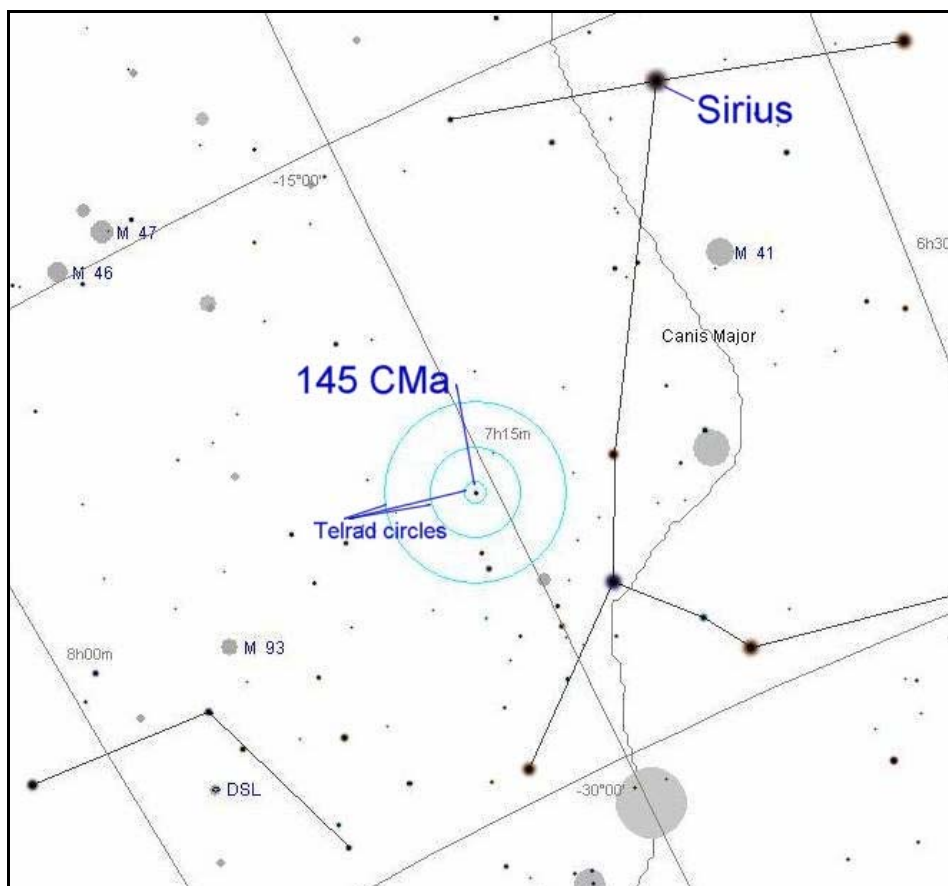
beautiful have been hiding there so long with none of us having seen it?

One of our visiting public was from Geneva, Ohio – a long drive for him, indeed. He had a great time and said he was more than happy he'd made the long trip and planned to make it as often as possible. I was thrilled to hear that, and was very proud of our club and all our members that braved that cold night. Man! It gets cold when it's that clear on a winter night. Ever notice?

I know you all will be attending the March 25th event at the

observatory. I honestly had meant to discuss that free software I used, *Cartes du Ciel*, and how amazing it

is. I'll tell you this, if you want a copy, let me know and I'll burn CD's for all those that are interested. Yes,



the software is free, but I'm going to charge \$5 for the CD, label and case. ALL proceeds will go to the ACA Treasury. More details on the great software package to follow. Don't want to pay the \$5? No problem! Just Google 'Cartes du Ciel' and you'll be taken to the web page where you can download it absolutely without cost or strings – no sign in, signup or anything else. It's worth your time, believe me.

A Night On The Mountain

The National Optical Astronomy Observatory at Kitt Peak bills itself as the “world’s largest collection of optical telescopes.” It’s located on a mountain in the desert about 56 miles southwest of Tucson, Arizona on the Tohono O’odham Indian Reservation. The NOAO has 22 optical telescopes ranging in size from 16 inches to 4 meters and two radio telescopes. It’s operated by the Association of Universities for Research in Astronomy (AURA) and the National Science Foundation. Both Ohio State University and Case Western Reserve are members of AURA.

Most of the telescopes are available to astronomers conducting research. Time is allocated by a selection committee that chooses among hundreds of competing proposals each year. Woe unto the poor astronomer who has waited over a year for a single precious night only to encounter overcast skies.

Kitt Peak has two programs open to the general public. The first is their Nightly Observing Program. A maximum of 36 participants arrive in the late afternoon, tour the facilities, and enjoy a short time at two of the telescopes associated with the Visitors Center. The second program, in which we participated, is called the Advanced Observing Program (AOP). It’s an amateur astronomer’s dream come true. The AOP has two observatories. The first is equipped with a 20” Richey-Chretien reflector on a Paramount ME mount. Observatory #2 has a 16” Meade Schmidt-Cassegrain reflector on an equatorial mount. Both observatories are equipped with impressive assortments of cameras, eyepieces and other related equipment. In essence you rent the use of

one of these observatories, complete with a Telescope Operator for the entire night.

Our night at Kitt Peak was Tuesday, February 21. My wife, Pam, and I arrived about 3:30 in the afternoon. The road is closed to incoming traffic after 4 pm so that observations are not disturbed by headlights. It was cloudy when we arrived. After meeting our Telescope Operator, Kevin Bays, touring some of the facilities, eating a light dinner in the cafeteria, we went to sleep in our dorm room. Our alarm clock went off at 9:15 pm and our Telescope Operator collected us at 9:30 with news that the skies had cleared. Sometimes it happens. The 20” Richey-Chretien scope was ours until the next morning.

AOP participants correspond by email with their assigned Telescope Operator in advance to plan the observation. Most people provide a list of the objects they want to see.

We started with the Orion Nebula at about 10 pm. The scope was controlled by RC Optical System Telescope Control Center hardware and software. Mounted on the main scope was a TeleVue 76mm (f/6.3) APO refractor equipped with a Canon Rebel Digital Camera. CCD

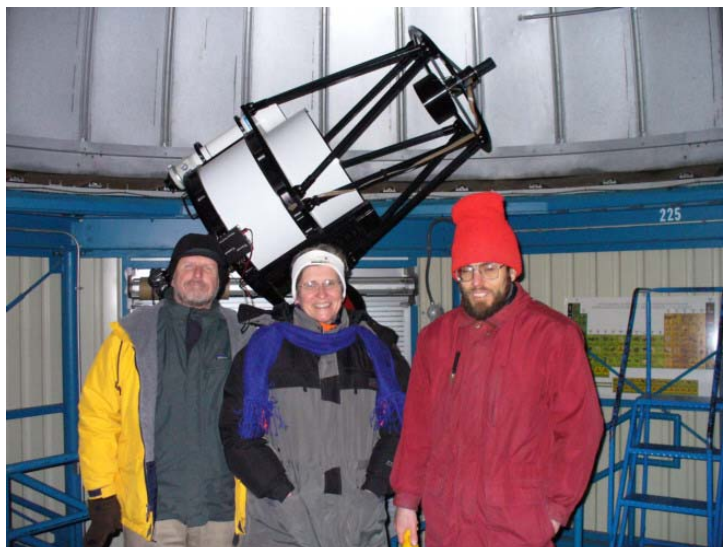
Imaging was available but we did not use it because of the long exposure times required.

A midnight lunch is normally enjoyed back at the cafeteria between midnight and 1 am. The moon was expected to come up about 1:30 am so we focused (literally and figuratively) on the deep space objects until that time and didn’t stop for “lunch” until nearly 2 am. Your meal is ordered at least a week in advance and is found in the refrigerator waiting to be warmed in a microwave oven.

Our favorite objects, in no particular order, were the Horsehead nebula, Whirlpool galaxy, Orion nebula, Leo Triplet galaxies, Reflection nebula, Globular Cluster, Galaxy NGC 4565, Cigar galaxy and the planets Saturn and Jupiter.

We gave up at the first sign of dawn the next morning – around 5:30 am.

I only have two pieces of advice. First, prioritize your viewing. We all know that there is so much to see and second, most importantly, **DRESS WARMLY**. At the nearly 7000 foot altitude, nighttime temperatures, even inside the dome, were in the mid 20’s.



All considered, it is the experience of a lifetime for an amateur astronomer and we plan to return.

David and Pam Feltner

Dinner time - ACA Dinner time, that is!

At the last general membership meeting, it was finally decided. We ARE having a dinner and here are the details – the ‘Who, What, When, Where and Why’ you were taught in school. Remember?

Who? US! Members of the ACA and guests.

What? Dinner! All you can eat.

When? Saturday, April 1st (please, no ‘April Fool’ jokes) at 7:30PM. Members wanted a 6:00PM time, but the restaurant couldn’t accommodate us until 7:30PM. Hey, have a few peanut butter crackers if you get hungry before then.

Where? Golden Corral Buffet & Grill
2819 S Arlington Rd
Akron, OH 44312
330-645-9740

Why? Because this is what we do – have FUN together, whether it’s out under the stars or dining together.

Cost? \$8.99 per person for the food plus \$1.49 for a bottomless soft drink (plus tax and tip, of course) - to be paid at the door by attendees. There's a small discount offered to card-carrying 'Golden Buckeye' folks.

Benefits of having our dinner at a restaurant?

First, there will be a large selection of food from which you can chose - including deserts.

Second, there is no prepaying as with a catered event – so no worry if you can’t make it. Just don’t show up. We’ll be disappointed you’re not with us, but you won’t be out any money, either. If some other plans of yours fall through and you find yourself with nothing to do on April 1st at dinner time, come join in the fun and all-you-can-eat food. I’m told with some authority, you won’t leave this place hungry. No matter what your eating habits, there will be plenty of fine cuisine that will satisfy your tastes. Bring a friend and impress him/her with your wonderful friends and fine discriminating selection of a group as grand as the ACA!

The Night Sky

Newsletter of the Astronomy Club of Akron

c/o Ray Hyer, Editor

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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.

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

The Astronomy Club of Akron
c/o Diane North, Treasurer
795 Mohawk Ave
Akron, OH 44305-1811

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

ADDITIONAL 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.