



The Night Sky

The Newsletter of
The Astronomy Club of Akron

www.acaoh.org

Volume 32 Number 3

March 2010

Next Meeting: Friday, March 26, 2010 8:00PM

ANNOUNCEMENT

Nomination of club officers will take place at the meeting on Friday, March 26th. Official club election to be held the following meeting on April 23rd.

The following positions are open for the 2010 election:

- President
- Vice President
- Treasurer
- Secretary
- Assistant Secretary-Treasurer
- Publications Secretary (aka Newsletter Editor)



Open star cluster M35 with NGC 2158 (small cluster) By ACA Member Len Marek. I used the Tele Vue Genesis SDF with the same camera equipment used for M42, the Veil nebula published in February's newsletter. With it being only 17 degrees outside I was able to cool the camera's CCD chip down to -30 deg C. This resulted in very little image noise. I also applied flats in the processing steps using CCDSoft. The image consist of 5 frames, 3 minute exposures each in Red, Green, and Blue.

Ramblings of the President

By Glenn R. Cameron

Hello my starry-eyed friends. There is a new Facebook group called, "Astronomy Club of Akron." I created it as a social meeting place for ACA members only. You're welcome to join if you're a member in good standing (dues paid). Please come on out to <http://www.facebook.com/>.

Search for "Astronomy Club of Akron" and join. We'll be able to chat with each other online and share astronomy stuff.

How cool is it that a new engine could get us, or a probe, to Mars in 40 days! It's an electric engine that uses magnetic fields to channel superheated plasma out of a nozzle. Steady acceleration and deceleration will accomplish this miracle. This is far better than slinging us, or a probe,

as fast as possible in one burst of acceleration at a point where Mars will be in nine months or so, then use Mars' gravity to slow it down. <http://www.space.com/scienceastronomy/new-particle-anti-matter-100305.html>

Speaking of Mars, the Mars Express spacecraft made a very close pass to Mars' larger moon Phobos. It passed at about 42 miles from the orbiting "spud."

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OFFICERS 2008 – 2010

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OTAA Representative

Lou Poda

Activities Calendar

Club

- March 13 - Special Event: Messier Marathon at 7:00 pm. May 15 - OTAA Scenic Vista Stargaze.
March 20 - Open House at Portage Lakes Observatory at 8:00 pm. August 14 - MVAS-OTAA meeting at the MVCO.
March 26 - ACA Club Meeting at Kiwanis Hall.

Celestial

- March 7 - Last Quarter moon at 15:40 UT. March 23 - First Quarter moon at 11:00 UT.
March 12 - Moon at apogee at 10h UT. March 28 - Moon at perigee at 5h UT.
March 20 - Vernal Equinox at 17:33 UT. March 30 - Full Moon at 2:25 UT.
March 22 - Saturn at opposition at 0h UT.

The deadline for article submission is the 6th of each month. 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 relevant to our forum. If you do not have access to a computer a handwritten article will suffice as long as it is legible. Any images submitted should be saved in .jpg format.

— PLEASE SEND IN YOUR ARTICLES —
Send your articles, items for sale, and comments to:
Jason Shinn
1579C Treetop Trail, Akron OH 44313
truemartian@aol.com

Ramblings of the President (con't)

This is the closest flyby yet. <http://www.space.com/scienceastronomy/mars-express-phobos-flyby-100303.html>

Come on out to the observatory on March 13th. This event will be our annual Messier marathon.

Also, on March 26th at the club's monthly business meeting, we will be nominating members for the upcoming April officer elections. Please consider running for an office. All positions will be voted on. I will not be running for any office. I have recently started a new job and will be concentrating my efforts to that enterprise. I will still be active in the club. Please step up and run for office. We need new blood and new fresh ideas to keep our club great.

*Article by Glenn R. Cameron
ACA President*

ACA Membership Meeting

by Gary Smith

Friday March 26, 2010 8:00PM

**Kiwanis Hall
725 Portage Lakes Drive
Portage Lakes, OH 44319**

Guest Speaker: Ron Kalinoski

Ron's stargazing days began at age 10, when he asked his father for his first telescope, a 60mm Sears refractor. A member of the ACA since 1995, Ron is also a member of The Planetary Society and the Lehigh Valley Amateur Astronomical Society. In his spare time, he enjoys travelling to the southwest to camp in the desert and observe the night sky. His favorite locations include Big Bend National Park, VLA, Kitt Peak Observatory, Chaco Canyon, Mount Wilson Observatory, and Death Valley National Park.

Abstract

Have you ever wanted to grind your own telescope mirror? How do you get started? Well, come out to our March meeting and learn the mirror grinding process any amateur astronomer can use to produce a high quality mirror. The talk will cover rough grinding, fine grinding, making a pitch lap, polishing, and mirror correction. Also included will be a demonstration of mirror grinding and a slideshow to help illustrate mirror-making fundamentals. On display for inspection will be Pyrex blanks, grinding grits, pitch laps, knife edge tester, & mirror rack. In our discussion, we'll consider some of the pitfalls to avoid while grinding your mirror and where you can purchase materials.

*Article by Gary Smith.
ACA Vice President*

February Treasurer's Report

By Lew Snodgrass

1/29/2010 Through 2/27/2010

Checking Beginning Balance	\$2,360.90
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Income

Dues	30.18
50/50 Drawing	17.00
Observatory Auction	42.00
Total Income	\$89.18

Expenses

Observatory Improvements	34.38
ACA Yearly Dinner*	313.03
Guest Speaker's Dinner	12.63
Total Expenses	\$360.04

Income Less Expenses	\$270.86
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Checking Ending Balance	\$2,090.04
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Reconciled Charter One	\$2090.07
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Difference	\$0.03
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Savings Opening Balance	\$5,924.79
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Earned Interest**	0.24
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Savings Closing Balance	\$5,925.24
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Charter One Checking Balance	2,090.07
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Charter One Savings Balance	5,925.24
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Petty Cash	50.00
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Total	\$8,065.31
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**The yearly maintenance workers and speakers dinner at Golden Corral.*

*** Note: The earned interest on savings in 2009 was \$10.97.*

*Article by Lew Snodgrass
ACA Treasurer*

Minutes of the February 26, 2010 General Membership Meeting

By Rosaelena Villaseñor

8:00PM - Call to order and introduction of tonight's guest speaker: Clyde Simpson, Observatory Coordinator, Department of Astronomy, Cleveland Museum of Natural History. Clyde brought meteorites from the collection housed at the Museum as well as some sample rock material typical of other planetary surfaces. As always, Clyde's talk was a fascinating hands-on experience. We had the opportunity to actually pick up and hold 4.5 billion-year-old material from outer space.

9:10PM - Brief coffee-break with coffee provided by John & Justin Phillips. Thank you, John & Justin!

- Members looked over the items up for auction.

9:25PM - Business meeting called to order and included the following:

Treasurer's Report:

- Club account balances
- Potential savings with moving to a different insurance company.

Observatory Director's Report:

- State of the Observatory.
- Preparation for Messier Marathon in two weeks.
- New Meade diagonal finishes the job of allowing the Club 14" to reach the zenith.
- Excess, unused items from the Observatory brought to the meeting for auction.

Calls for observations:

- Constant overcast conditions has severely limited celestial observation.
- Freddy Huffman reported numerous sunspots he observed during a brief break in the clouds.

New Business:

- NOMINATIONS of OFFICERS will occur at the March meeting for election in April.
- THE CLUB NEEDS YOU - Run for office!!

Article by Rosaelena Villaseñor.



The Astronomy Club of Akron's Meade LX200 14" Schmitt-Cass. By ACA Member Jason Shinn.

Observatory Report

By Ron Kalinoski

ACA held an outreach program for fifth graders at Barr Elementary School in Canton on February 19th. We gave a slideshow presentation on astronomy basics to each class. The students were excited to learn about astronomy and they asked many questions. There is nothing like a group of fifth graders asking thought provoking questions about the Universe to rekindle one's interest in astronomy.

Our auction of surplus observatory equipment at our February meeting was a success netting \$42. We sold everything except an off-axis guider and telescope mounting ring. Over the past few months, we have been organizing the observatory for our upcoming star party season. The main event to start off our star party season is our Messier Marathon. This event is planned around Vernal Equinox allowing all objects in the Messier catalog to be viewed during one night of observing. Our first window of opportunity is March 13th. With higher temperatures forecasted in the next few days, it's just possible the

large amount of snow we received in February will be melted by star party time. As in past years, we will have awards for members observing the most Messier objects during the marathon. First place prizes for Manual and Computer-Aided Telescope categories will be a one-year ACA membership. Second place winners will receive a Messier Marathon Certificate. If the observatory grounds are not suited for the marathon on March 13th, we'll try again on March 20th. And of course, we'll be brewing Akron's best free coffee.

Article by Ron Kalinoski.
ACA Observatory Director



Comet 17p Holmes imaged through the Astronomy Club of Akron's Meade LX200 14" Schmitt-Cass. By ACA Members Jason Shinn and Ron Kalinoski.

Imaging Deep Sky Objects from Northeast Ohio

By: Len Marek

I have been an amateur astronomer since I was a youngster back in the 60s. As a child, I have always been curious about the stars. I was in high school when I remember catching sight the venerable Sky & Telescope in the magazine section. It was the September, 1968 issue. I was instantly hooked on the wealth of material that was available at the time. I especially enjoyed three areas of the magazine. The Messier objects written by Evered Kreimer and John Mallas, the amateur astrophotos and all those ads like by A. Jaegers, Edmund Scientific, Cave Optical Co., Unitron and on and on!

Those amateur astrophotos were stunning I thought. Especially the ones taken with a Polaroid Land Camera! Now wait a minute I thought, I can do that! My mom had a Polaroid 3000 Land Camera! The thing only weighed like 10 pounds, so I thought at the time. And that was how I started! I still have some of those astrophotos that I took at the time.

Did I take the photos, tons of 'em. I don't know how many rolls of Tri-X film, D-76 developer I went through too and not to mention that nasal pinching acetic acid in the stop bath!

Flash forward to the year 2004, I decided to spend some money and have an observatory built by "Backyard Observatories" with Scott Horstman and crew, bought a Meade 12" LX200 GPS, and a new era in astronomy was born for me. With the GPS, I was now able to easily locate all sorts of Messier and NGC objects. Gone were the star-hopping days through the finder scope. Well it didn't take long before I got the urge to do some astro-imaging again. This time though, it was digital.

I have tinkered with the Meade DSI and with my Canon EOS 10D. The Canon was nice to use but sky fog set in too soon with the severe light



pollution that we have here in northern Ohio. Not to mention the fact that we have so few clear nights a year, there was this pressing need to challenge myself in taking good astro images!

After trying many different tactics, I have finally found the perfect solution for me. Over the course of the last year or so, I have learned much about taking flats, darks, and guiding the images that I take.

First and most importantly, I feel it's imperative to have an off-axis guiding (OAG) system. The chief reason being that in using a imaging camera along with its pass-band or color filters, many faint stars that would appear in my imaging camera's autoguide chip became invisible because of the restrictive light transmission of the filter itself. I currently use the Orion Deluxe OAG, which serves well with my imaging camera the SBIG ST2000XM with the SBIG CFW10 filter wheel and

coupled onto this OAG, I use my Meade DSI Pro to guide off the pick-off mirror in this system. What is so nice is that the Meade DSI Pro's chip array is 512 pixels wide x 492 pixels high which gives me a lot of area to choose a bright enough guide star to autoguide with and the starlight was unfiltered because this optical plane was in front of the filter wheel. This was almost as big as the guide chip on the SBIG ST2000XM camera.

Now the wonderful world of autoguiding can't get any easier than with Craig Stark's masterpiece software called PHD Guiding. PHD in this case stands for "push here dummy." The software is a free download from Stark Labs online which can be found at <http://www.stark-labs.com/phdguiding.html>. I use CCDSoft from Software Bisque for my imaging platform. The "Sky6" planetarium software is what I use to study and plan my imaging sessions. Nice software! As for critical

focusing, you can't beat FocusMax. Free again! I use that with my Robofocuser unit.

Among my first images taken with my SBIG camera was the Lagoon Nebula (see figure 1). This is just five 1 minute exposures using my Jaegers 6 inch f/5 richest field achromatic refractor using a Hydrogen (H-alpha) filter.

Another of my favorites using this telescope was of the Horsehead Nebula (see figure 2), again using a Hydrogen (H-alpha) filter. This was a series of 8 seven minute exposures. Actually I was just playing with the camera to see just how long of an exposure I could use before sky fog would set in. I was shocked at just what I was able to accomplish. None of this was visible using just my eyes since all of it was washed out in the light pollution.

It's wonderful being able to image from a terribly light polluted environment like Parma, Ohio! The sky here where I live is a ugly pink sky glow from the shopping centers around my area. The pass-band imaging that I do using my H-alpha, OIII and SII filters, really do a beautiful job of blocking the light pollution. I love using the Hubble palette using these filters on the emission nebulae. The regular RGB (red, green, blue) filters that I use are great for the star clusters and dust clouds. The Crab Nebula (see figure 3) for instance is an 8.4 magnitude object in Taurus. An object like this is really difficult to see visually from a location like Parma, but when imaged with a CCD camera, it's a different story. The photo was taken using my Meade ED 178 ED APO refractor with this Hubble palette. The image is

a processed result after taking 10 five minute exposures using the H-alpha filter, another 10 five minute exposures with the OIII filter and finally another 10 five minute exposures with the SII filter. For each one of the filters I would have to adjust the focus somewhat even though these filters are par focal. I believe the reason is that the images are taken though a refractor as opposed to a reflector or Schmidt-Cassegrain telescope.

Imaging here in northeast Ohio is not impossible. If you have the burning desire to capture some photons that have traveled at the speed of light for thousands of years onto a CCD chip, go for it! Capture the history!

Article by ACA member Len Marek

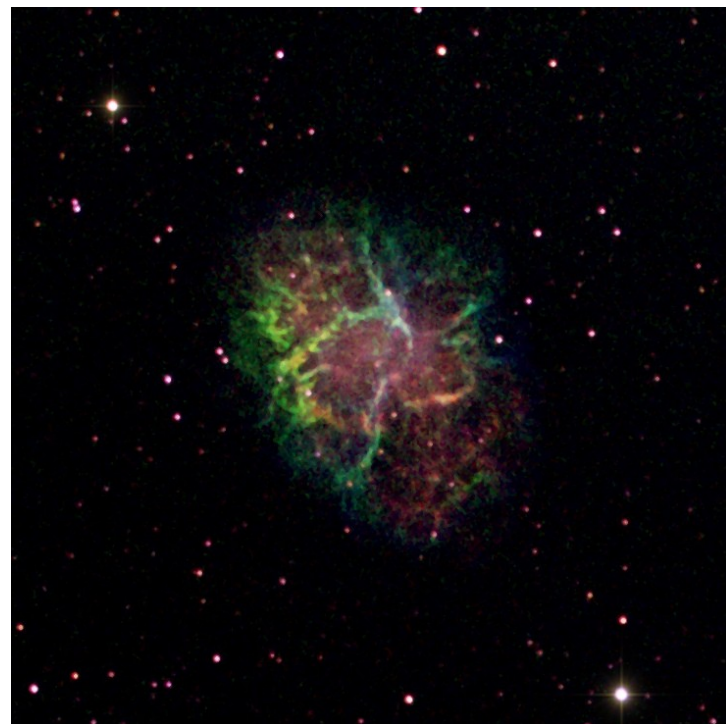
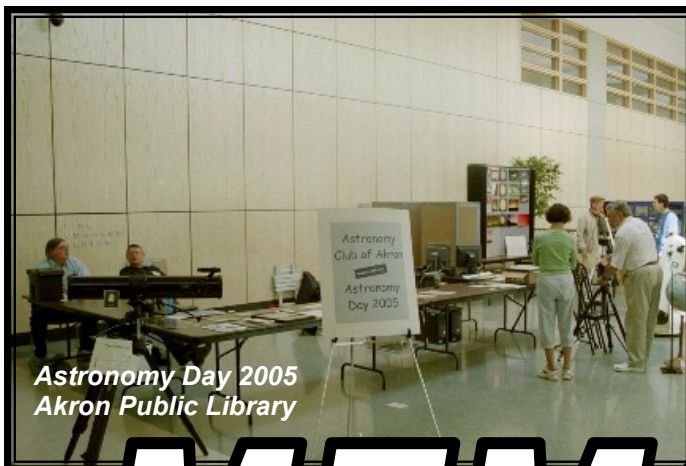


Figure 1. Top left: The Lagoon Nebula. Figure 2. Bottom left: The Horsehead and Flame Nebula. Figure 3. Above: The Crab Nebula. By ACA Member Len Marek

THANKS FOR THE



MEMORIES

The Night Sky

Newsletter of the Astronomy Club of Akron

c/o Jason Shinn, Editor
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Akron, OH 44313

For Club information, please visit our website: www.acaoh.org. **Astronomy Club of Akron** annual memberships renew in the month of May.

To join the ACA, **or to renew your membership**, please fill out the form below, place in an envelope and mail to:

Lew Snodgrass, Treasurer, Astronomy Club of Akron
1865 Stabler Rd
Akron, OH 44313-6124

Yes! I want to become a member of the Astronomy Club of Akron

(PLEASE PRINT)

NAME: _____ PHONE: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

EMAIL ADDRESS: _____

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

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 that the full color edition of *The Night Sky* newsletter is automatically sent via email, but I would rather have the B&W print version mailed to my address via USPS.