



The Night Sky

The Newsletter of
The Astronomy Club of Akron

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November 2006

Ramblings of the Editor

By Justin Phillips

Yes, you read that right. This month's newsletter has neither the President's ramblings nor the Vice President's column. I will be your substitute rambler this month.

The November meeting will occur on the 17th, so mark your calendars. That is, the meeting is on the third Friday rather than the fourth, so that it does not interfere with Thanksgiving celebrations. That said, I don't have much else to say about the club, so bear with me as I ramble about things I actually know stuff about.

As many of you know, a Mercury transit occurred on November 8. In other words, the littlest planet strolled between Earth and the humongous, radioactive ball of magnetic plasma commonly known as the Sun. Imagine a big, bright circle with a little tiny black speck on it. Unfortunately, the only way to observe this event from Northeast Ohio was over the internet, due to the ever-present cloud cover. I'm sure it was a wonderful sight wherever it could be seen. The next planet to transit the sun will be Venus in 2012, followed by Mercury again in 2016.

Some very important news for astronomers everywhere (as well as the general public) was announced on Halloween: A Space Shuttle mission to repair and upgrade the Hubble Space Telescope has been approved. The servicing mission is planned to occur in 2008. If successful, it will extend Hubble's useful lifetime well into the next decade. Thus, there will be many more amazing images coming our way.

Mars was in solar conjunction for most of October. Solar conjunction, of course, is the fancy term for Mars going behind the Sun as viewed from Earth. Obviously, this means astronomers can't point their telescopes at it. Perhaps less obvious, it also means that all spacecraft at Mars are out of contact with Earth for the entire period. The conjunction ended in late October, and data is again being sent to Earth.

New pictures from Mars Exploration Rovers Spirit and Opportunity are already available on their website, as usual. A few more Mars things to look forward to in the following month (s): a new (huge, as usual) image from Mars Reconnaissance Orbiter's High Resolution Imaging Science Experiment (HiRISE) camera, a weekly captioned image from Mars Global Surveyor's Mars Orbiter Camera (MOC), daily releases from Mars Odyssey's Thermal Emission Imaging System (THEMIS), and (possibly) daily images from MRO's Mars Color Imager (MARCI) and Context Camera. However, press release images from ESA's Mars Express orbiter will most likely continue to be few and far between, as they have always been.

With so much talk about the Sun, it seems worthwhile to mention the Solar Terrestrial Relations Observatory, STEREO, which launched on October 25. Its unique mission is to make three-dimensional images of the sun, in order to better

understand solar flares and prominences. STEREO is actually two spacecraft, launched on the same rocket, which will use the Moon's gravity to fling themselves away from Earth in opposite directions. As they move farther and farther away from the Earth and each other, they will take synchronized images of the sun, which will be processed to create three-dimensional models of the solar corona. It is bound to be a very interesting mission.

Well, that's enough rambling for me, and I'm sure you have had enough, so let me finish up with some links to more information.

Hubble Servicing Mission: http://www.nasa.gov/mission_pages/hubble/main/index.html

NASA Mars Site: <http://mars.jpl.nasa.gov/>

Mars Exploration Rovers: <http://marsrovers.jpl.nasa.gov/>

Mars Reconnaissance Orbiter: <http://marsprogram.jpl.nasa.gov/mro/>

HiRISE: <http://hirise.lpl.arizona.edu/>

Mars Global Surveyor: <http://mars.jpl.nasa.gov/mgs/>

MOC, MARCI and Context camera: <http://www.msss.com/>

THEMIS: <http://themis.asu.edu/>

STEREO: <http://stereo.gsfc.nasa.gov/>

If You Were Not There

You sure missed a good meeting on October 27. Joe Nieberding, a real NASA rocket scientist talked about space exploration. His video presentation gave a peek into what NASA is going to be launching for the next 30 years. It was a great presentation appreciated by all who were there.

The business meeting afterwards was only a few minutes with updates about the observatory.

AND then there was the 50/50 raffle which I won!!!



Joe Nieberding Photo by Justin Phillips

I do love the ACA. Come to a meeting and be the next 50/50 winner (at least try). Guaranteed a meeting of interest, fellowship and something to talk about besides clouds.

Respectfully submitted,
John Shulan
Secretary and lucky guy

OFFICERS 2006 – 2007

President	Dave Jessie	330-688-9043	djessie@neo.rr.com
Vice President	John Crilly	330-334-6668	jcrilly@neo.rr.com
Treasurer	Steve Rohweder	330-896-2849	srohweder@neo.rr.com
Secretary	John Shulan	330-836-0800	Pugman3@aol.com
Assistant Secretary/Treasurer	Gregg Crenshaw	330-785-7377	gbcrenshaw@sbcglobal.net
Observatory Director	Ron Kalinoski	330-837-5848	jones_ronbo@worldnet.att.net
ACA Webmaster	Glenn Cameron	330-456-2022	glenn@cameronclan.org
Editor, Night Sky	Pat & Justin Phillips	330-784-7922	phillipsaca@gmail.com
Trustee (term through 2007)	Peggy Stabholz	330-499-3174	SabinaSky@aol.com
Trustee (term through 2008)	Freddy Huffman	330-535-8009	atmos@netzero.com
Trustee (term through 2009)	Tom Mino	330-923-7704	tjmino@neo.rr.com
Statutory Agent	Mark Kochheiser	330-882-3713	mkochheiser@neo.rr.com
OTAA Representative	Lou Poda		

Activities Calendar

Club

Celestial

Nov. 17, ACA General Membership Meeting 8:00 pm	November 8, Mercury Transit
	November 20, New Moon
Nov. 25, Open House and Star Party 7:30 pm	December 5, Full Moon
Dec. 16, Open House and Star Party 7:30 pm	December 20, 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

Observatory Report

On Saturday, November 4th, Fred Huffman and I made some repairs to the Observatory building. Our focus was to seal the gaps between the roof and the walls on the north and south sides to prevent rain and snow from entering. We fastened weatherstripping to the south wall, allowing the free end to seal against the roof. On the north end, we installed a piece of treated lumber (2x4) to the inside of the roof to fill the gap between the roof and the wall. We attached weatherstripping to the treated lumber, allowing the free end to seal against the building. While working on the north end of the roof, we noticed the eye bolt used to connect the roof and the pulling cable had been stretched open. We replaced the eye bolt and reattached the pulling cable. We removed some slack from the cable and performed a cable inspection. The cable showed a number of tears and kinks. The cable needs to be replaced soon before it fails.

The club has a Unitron mount, tripod, and telescope stored in the Observatory building. To free up more space, we will have an auction or raffle for this unit at our next meeting.

Ron Kalinoski

Reminder: This Month's Meeting November 17



The ACA at Hidden Hollow 2006

Yes, the ACA made an appearance at Hidden Hollow this year! The club gallery traveled with me to the event and the response was very positive. So positive in fact that Hidden Hollow is now considering holding amateur photo contests during future events! Once again, I have to say thanks to all the club members who contributed to the gallery. You have made it a success wherever we have shown it. Not only do your photos make for a great display, they also inspire others to do astrophotography. I encourage all of you to continue your fabulous observations and continue recording them, be it on video, film, or digital, for our club gallery. Remember YOU make the club gallery! — Jason Shinn

Treasurer's Report: 10/1/06 - 10/31/06

Steve Rohweder, Treasurer

Total Beginning Assets	\$8871.62
Income	
Interest on balances	\$5.91
Total Ending Assets	\$8877.53

Shooting the Harvest Moon

Wow, what a beautiful harvest moon on October the 7th. I couldn't resist three full days of clear skies with such a great target. The photos were taken of the waning moon on the 8th, 9th, and early the 10th. I used my 3" Bushnell Northstar reflector and 90mm Orion Starmax. You never seem to lose your wonder of looking at the Moon through any scope.

The Northstar is 700mm with an F/9.2 and the Starmax is a very slow F/13.9 at 1250mm. I own a Meade LPI which I purchased last year and have had a great time imaging Jupiter, Saturn, Alberio, and M44. On the Beehive, I was only able to manage the five central stars with the 6mm LPI. You can pick up a nice blue color for the central three stars.

The Moon makes a very good practice target. The later versions of the LPI have a "track dark spot" box to check. This allows you to use a dark centroid (the inside of a crater) to track the Moon if necessary. This feature is handy for tracking a crescent moon, but is not really needed for a very bright half to full Moon. All of the photos here are single frame with a range of exposure time from 0.33 to 0.17 seconds. The best photos were made with the Northstar. The Starmax pictures at almost double the power of the Northstar were slightly out of focus. Focus is probably the most critical adjustment when imaging any target. A parfocal ring is supplied with the LPI and is very helpful in getting the focus adjusted. The "Magic Eye" focus in the LPI software does not seem to work very well.

The power calculation works out to 700mm/6mm 117x on the Northstar and 1250mm/6mm 208x for the Starmax. I tried to image some of the stars in the Pleiades when the Moon made its passage at 1:00 am on the 10th, but did not have much luck. To get the stars bright enough to see required a really over exposed Moon. It was still spectacular to see it just by observation. The Ohio clouds moved in about 1:15 and thus ended the evening.

Randy Carleton – October 28, 2006



Photo #1 Note the bright ray extending from Tycho north to Mare Crisium



Photo #2 In this shot of the northern half, notice the color difference between Mare Serenitatis on the left and Mare Tranquillitatis just to the right. Several photos verified this difference. Light brown to a bluish grey.



Photo #3 Mare Crisium appears at the terminator. Cleomedes crater is on the northern rim and Langrenus crater can be seen directly south.

Introduction to SLOOH.com

Here is something new that I bet many are not aware of yet. I was bored one night when the weather wasn't cooperating and could not get my telescope out, so I did an Internet search for an on-line telescope. I didn't find very many, but was pleasantly surprised when I found Slooh. Slooh.com is an online observatory with two 14" Schmitt-Cassegrain telescopes with imaging capability that you can see on your computer. The observatory is on top of a volcano in the Canary Islands off the coast of Africa. If you buy a membership like I did, you can reserve telescope time on the Member Channel. The other telescope is the Editor Channel reserved for the administrators. There is a feature to snap pictures and they are saved for you to download.

Because of the exotic location, the nighttime is five hours ahead of us so you can start watching as early as 2:30 in the afternoon depending on the time of year. When reserving telescope time there are several objects to select from a list or you can enter coordinates for what they call a Solo Mission. I have seen members track asteroids and recently the Swan Comet.

They also have a radio show every night at 9:00 PM with various hosts and is a great way to learn more about Astronomy. There is a chat room, which you can talk to other members and ask the guide questions and they will answer them on the show.



To get started, when you visit the web site, what you will first see is the home page, and from there you can select the Launch Pad to get a preview of what is coming up. The site is very easy to navigate and user friendly. The Launch Pad has links to the Chat Room and Forum, and you can select the tabs across the top to check on weather conditions and the mission log to view your pictures.



The Command Reservation tab will take you to where you can reserve the telescope time by selecting a time slot. A list box will appear to select an object, and if you change your mind you can make changes or delete the mission.



On the Launch Pad you select the Mission Login button to login and then the observation screen will open.

You will first see the sky cam showing the conditions of the sky. To select a channel, you click on either Editor or Member at the top. Each telescope has a wide field and high mag view. To change between them you click on the three circles on the right. The smallest is the sky cam, the middle circle is the wide field, and the largest circle is the high mag. There are other tools and features on the left, but I will leave that for you to explore. Overall the interface is very easy to use.

Each mission will last 5 minutes, and imaging takes about 4 minutes to complete. It is fun to watch the object come into focus as the different filters are used. Here are some of the pictures I've taken on Slooh.



The Full Moon

http://www.slooh.com/data/teide/onedegree/2006/09/08/20060908_224353_7588.jpg



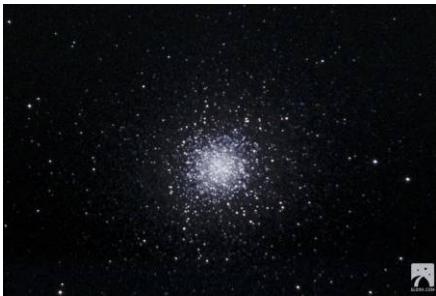
Planet Jupiter when Red Spot Jr. was brushing along side of the Great Red Spot

http://www.slooh.com/data/teide/planet/2006/07/15/20060715_180942_4377.jpg



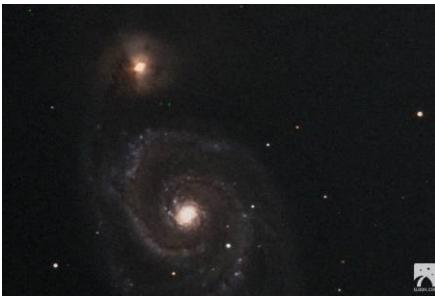
Planet Jupiter when shadow of Io was in transit

http://www.slooh.com/data/teide/planet/2006/05/15/20060515_210150_7635.jpg



Hercules Cluster M13

http://www.slooh.com/data/teide/deepsky/2006/06/19/20060619_212840_2190.jpg



The Whirlpool Galaxy M51

http://www.slooh.com/data/teide/planet/2006/07/14/20060714_180552_4551.jpg



The Trifid Nebula M20

http://www.slooh.com/data/teide/deepsky/2006/06/28/20060628_213442_6855.jpg

If you are interested, you can sign up for the seven-day free trial. If the sky rating is poor, they turn off the meter and you will not be charged for the time. The pricing starts at \$4.95 for 10 missions, then \$24.95 for 100 missions. After I tried it, I had to get the full package and signed up for the command reservation at the price of \$99.95 for one year. Considering the price a telescope, this is a bargain. I have been a member of Slooh for six months and highly recommend it. The only restriction is that they insist on a high speed Internet connection.

An on-line telescope is not as fun as looking through a real telescope, but Slooh is a great alternative for a cloudy night. If your interested the web site is <http://www.slooh.com/home.php>, so check it out and maybe I'll see you in the chat room some time.

Clear skies.

Rob Watkins

CLASSIFIEDS

I have an 8" Skyview pro with dual drives. (not go-to) with carrying case, assorted eyepieces, and a few extras. 3 yrs old. Very good condition. \$275

<http://www.telescope.com/shopping/product/detailmain.jsp?itemID=171519&itemType=PRODUCT&RS=1&keyword=>

If you have any questions, please contact me.

Brian G. Krause

330-796-7661 brian.krause@goodyear.com

Photo Source: Orion Website
Actual item may vary

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The Warren Rupp Observatory and Hidden Hollow Astronomical Convention 2006

By Jason Shinn - Astronomy Club of Akron, Ohio USA

(Originally written for the NASA Radio Jove project bulletin.)

(<http://radiojove.gsfc.nasa.gov/library/newsletters/toc.htm>)

A special thanks to Tammy Plotner for her help in preparing this article.

One of the world's largest amateur operated optical telescopes, "Big Blue" makes its home at the Warren Rupp Observatory (WRO) near Mansfield, Ohio. Construction was funded with private donations and the telescope was named for its largest contributor - Mr. Warren Rupp. The entire Observatory was designed and built around a 31" mirror donated by Norm Oberle, founder of the Lake Erie Astronomical Project (LEAP).

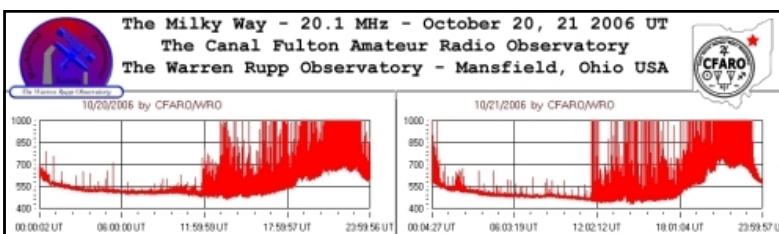
The heart of the Rupp telescope is constructed from one of two incredible, fused quartz mirror blanks donated to LEAP by General Electric and hand ground by Oberle. At one time, these blanks were intended for the Mayall Solar Telescope at Kitt Peak, but changes to specifications left them without a permanent home. The massive mirror collapsed every effort to house it in a conventional telescope body until it was adopted by LEAP for the construction of the Erie Observatory project. Unfortunately, for both the project and Oberle, construction of the observatory had to be abandoned when the neighboring property was sold. The new owner of the land erected night lights, virtually destroying the sky for astronomical observing. Thus began the quest to find the mirror a new home. The Richland Astronomical Society (RAS) heard of the plight of the fantastic mirror and contacted a local philanthropist to aid in its preservation. Today the 31" remains under the care and administration of the RAS and enjoys continued support from the Rupp family through grants.

The WRO is located on the grounds of Friendly House Hidden Hollow Resident Camp near Mansfield, Ohio (USA). The observatory holds monthly public events and hosts numerous educational programs for Hidden Hollow campers, student groups, scouts, and anyone interested in pursuing astronomical outreach - all at no cost. WRO and RAS also host one of Ohio's premier astronomical conventions, the Hidden Hollow astronomical convention. Once each year, folks from all over the United States gather under some of the darkest skies in Ohio to swap stories and observations. Aside from observing at night, lectures and workshops are held during the day. This year some of our guest lecturers included Brent Archinal of the U.S. Geological Survey (USGS). Brent is a researcher for the USGS and his area of specialty includes developing better coordinate systems for planetary bodies in the solar system. Brent is currently working on a coordinate system for the return to the Moon project. Terry Mann, President of the Astronomical League and RAS member, was also a guest speaker. She has won numerous awards and recognitions for her public outreach in astronomy. Terry is currently spearheading a project to get the younger generation interested in space science and astronomy. In the "hands on" arena, Barb Hubal (a member of the RAS) held a solar filter workshop this year. During the workshop each guest was able to construct and take home a custom Baader solar filter. Also lecturing was Rick Schrantz, president of the Bluegrass Amateur Astronomy Club of Lexington, KY and twenty year veteran of astro-imaging. Rick lectured on the use of a web cam for planetary imaging.

The Canal Fulton Amateur Radio Observatory (CFARO) made its second appearance at Hidden Hollow this year. I was again invited by RAS president and observatory director, Tammy Plotner, to lecture on my radio astronomy hobby. At last year's event I made a kiosk of sorts to allow folks to listen to sample radio sounds one might hear at decametric wavelengths. This year the CFARO telescope traveled to Hidden Hollow for a live demonstration! I arrived the day before opening registration and set up a complete Radio Jove system with one 10' dipole and two computers. Both computers were used to monitor the radio background continuously. Computer one charted the Milky Way over a twenty-four hour period at one sample per second. Skypipe was set to show a 24 hour window from 0000 UT to 2359 UT through which it displayed the local transit of the plane of the Milky Way. During the day, computer two monitored the background for possible solar radio bursts, with a sample rate of 10 samples per second. Having a "live" demonstration like this, open all day and all night, allowed those interested to see the Radio Jove project firsthand.



Despite less than cooperative weather, this year's convention at Hidden Hollow was a tremendous success. Many thanks to the Radio Jove project for donating a copy of the project's educational CDs, "Visual Primer to Radio Jove" and "Radio Jove Reference", for the door prize drawing. The prize winner, a budding amateur radio astronomer, was thrilled to have won the CDs! (Contributed door prizes are raffled to participants to meet the expenses of having such an event.) I am looking forward to attending future conventions with the complete Jove telescope. Responses from convention visitors to CFARO and the Jove project were very positive, a major score in outreach for Radio Jove. As the sun approaches solar maximum there will be tremendous opportunity to show others just how fascinating the Radio Jove project truly is. With as much excitement as I have seen over simple lighting strikes, a live demonstration with an active sun or Jupiter could be nothing short of amazing!



INFORMATION

The Radio Jove Project: <http://radiojove.gsfc.nasa.gov/>

The Warren Rupp Observatory: <http://www.wro.org/>

The Canal Fulton Amateur Radio Observatory: <http://members.aol.com/cfar0/index.html>

The Astronomy Club of Akron - Akron, OH: <http://www.acaoh.org/>

The Bluegrass Amateur Astronomy Club - Lexington, KY: <http://www.ms.uky.edu/~bgaac/>

The Astronomical League: <http://www.astroleague.org/>

The U.S. Geological Survey: <http://www.usgs.gov/>