Newsletter of
The Black River Astronomical Society
Guidescope

February 2010

Black River Astro News

The Black River Astronomical Society Library

Article and photo by John O' Neal

Thanks to a most generous donation by our long time friend, club member, and benefactor, Diane Lucas, I am most pleased to announce that I have reassembled the Black River Astronomical Society Library at my home in Amherst, Ohio. Note that the indexes to both Astronomy and Sky & Telescope magazines are in the Library folder on our Club's Yahoo site. These magazines are available to loan. If you would like to borrow any of them, email or call me and make arrangements to stop by or let me know what issues you are interested in and I will bring them to the next meeting.

The Black River Astronomical Society Library is officially open for business. As of today we have about 1500 magazines and 200 books in our Library. These books and magazines are stored in my home but are available for member's use. You can review the online listings or make arrangements to stop by and look at the actual books themselves.

If you see books in the online listings you would like to borrow you can send me an email and I will bring the requested books to the next meeting, or you can make arrangements to stop & pick them up, whichever is most convenient.

In the photo to the right you can see the shelf containing the Books. I've even got a stepladder waiting for us vertically challenged folks who can't quite reach the top row.

As you can see from the picture there is a little bit of space left on the shelves, do don't hesitate to call me if you have books available to fill the empty shelf space.

As an afterthought, to gain access to the previously mentioned Yahoo Group site, you must sign up first. If you already have a Yahoo account, everything is ready to go, just sign up. No yahoo account? Simply take (literally) a minute of your time to create one and then join us on Yahoo.

Yahoo site URL: http://tech.groups.yahoo.com/group/blackriverastro/

Create a Yahoo account:
https://edit.yahoo.com/registration?.src=fpctx&.intl=us&.done=http://m.www.yahoo.com/

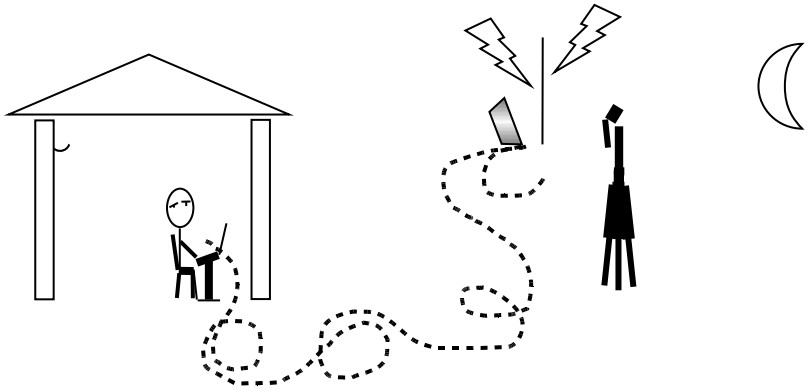
Loaner Scopes Available

Want to look at the sky but don't own a telescope? No problem! The Black River Astronomical Society is here to help. BRAS has a loaner scope program. Just ask one of our officers for details and then you can come out to the Nielsen to borrow one of the designated scopes for your personal use. We also have some binoculars available, too.

Features

Web Cam Astrophotography: Part 3

By Len Jezior



Researching the limits of using a web-cam to scout & photograph the sky, I've discovered some technology limits. I wanted to share them with you before too many or too long extension cables get purchased. There are some distance limits for cables between devices.

To recap: The original idea was for my scope to sit outside in the cold weather while I sat comfortably in a nice dry & warm, enclosed area viewing the night sky on a video monitor, taking photos of my survey. The idea works, but with some limits. Let me mention again my scope is a Meade ETX 125ec.

Along with a web-cam, I'm also using Meade's telescope control software for PC's. Since the software syncs the scope with a star map, locating targets couldn't be easier. I did need to buy a RS232 to USB converter for the PC connection but the cost was minimal. Using a web-cam, scope control and image processing software all on the same computer provides a complete observation package for me. A scope-mounted CCTV camera is used as a spotting scope.

Below are 3 diagrams illustrating the distance limits between devices…

The RS232 connector that comes with the Meade software includes a 1 foot cable terminating on a 4-wire plug. According to instruction, this plug must be connected to the Handbox AUX jack, not the telescope's AUX jack. The plug on this cord is the same size that fits in a telephone handset. (That's handset cord, not the telephone's base-unit line cord.) I was not able to successfully extend the length of this connection. I made a male / female extension. I tried to install several different telephone handset cords within this junction. Either the cords I used were inappropriate or 1 foot is the maximum distance between the Meade RS232 unit & Handbox. Either way – no good.

I purchased two "9 foot USB extension cords" thinking to add 18 feet to the camera's already 6 foot length of USB cable. In practice, only 9 feet of additional cable length could be added. Extending

more than 9 feet of cable resulted in *Logitech's* web-camera failure. Perhaps a different web-cam might respond differently. **Maximum distance between *Logitech* web-cam & computer USB port - 15 ft.**

Having an extra 9' USB extension cord, I used it to extend the distance between the computer & the USB converter. That worked. The up-side is scope control is availed at the computer and close to the scope – a convenience during set-up. The down-side is it puts the handbox into the weather.

Alternately, I was able to extend the distance between the handbox & scope by employing a 20 foot CAT-5 computer network cable & Female-Female "gender-bender". I connected the handbox to it's 3-foot coiled cable to the gender-bender to the network cable with final termination to the scope. Extending this cable beyond a total of 25 feet makes scope control unpredictable & erratic. The scope would suddenly begin changing azimuth and/or elevation without command. I would say the limit on **handbox to scope length is 25 feet max** (using CAT-5 cable). The up-side is the handbox can be secured indoors. The down-side is there's no scope control located near the scope – an inconvenience during set-up.

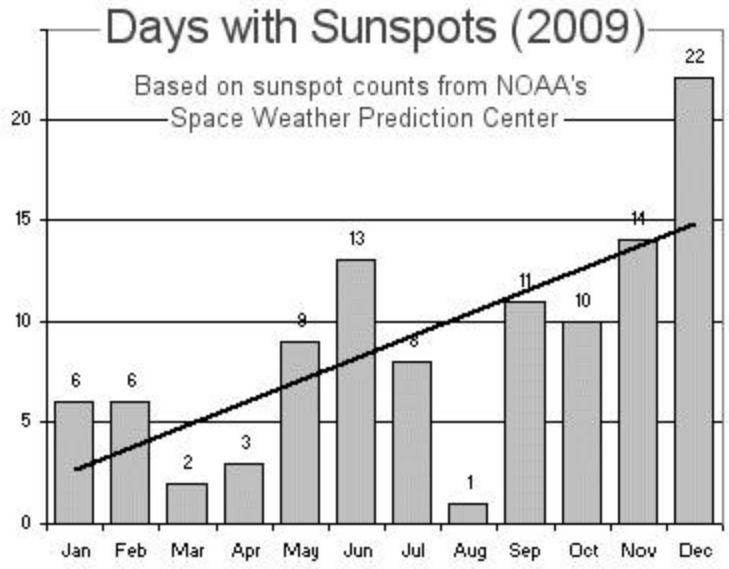
Note: Be sure to view the attached PDF files showing setup diadrams!

Sunspot Activity Rapidly Rising

by Denny Bodzash, attached photo by John O' Neal

The last few years have been quite a bummer for sunspot-loving solar observers. Sure, prominences, flares, and granulation is fun to look at, but the lack of sunspots will undoubtedly leave many disappointed. The good news is that the days of blank suns are decreasing noticeably. Over the course of 2009, on average, the average number of days with sunspots rose steadily. Below is the breakdown of sunspots per day for each month:

To illustrate the point further, the average days per month showing sunspots for the first third of 2009 was 4 days per month. By the last third of the year, that average was 14 days per month. If the trend continues, sunspots will eventually become a pretty much daily sight. As time continues further, multiple, large sunspots will become common as the sun heads toward solar maximum.



Taking the Show Online

By Denny Bodzash

We all share an interest in a specific field about which we are all experts in some area. Whether it be visual observing, equipment, astrophotography, or the physics that literally make the universe go round, we all know a lot, so why not share your knowledge with the world?

The good news is that one does not need to be a computer expert to get on the Web. Yes, traditional Web Sites are by far the most impressive way to gain a web presence, there are other, far less demanding ways to do so that require little more than knowing how to cut and paste. All of this is thanks to blogging and social networking services that are all over the Internet today.

If astro/regular photography is an interest, photo sharing web sites like Flickr, Photobucket, and a whole host of others allow for posting pictures, sometimes very large pictures, online, often for free. As a practical consideration, having a Web photo gallery is great insurance against a computer crash! That was my main motivation for going online.

Currently, several BRAS members are online. Check out our stuff and, since the skies have been so lousy lately, join us on the Internet.

The following members have Web Sites

John O' Neal http://www.onealwebsite.com/

Myself http://www.bodzashphotoastro.blogspot.com/

The following members have Facebook pages

Owen Butler

Kristi Nielsen

Liz Oesterman

John O'Neal

Fred Scharmann

Ed Swonger

If you have a web site, blog, photo gallery, or social networking page you want to share, let me know and I'll put it in the next *Guidescope* issue.

Opinion

A Most Gracious Thank You

On behalf of the whole club, I would like to offer a HUGE THANK YOU to Diane Lucas for her most extraordinary generosity in donating so much of her private astronomy library to the club. A complete set of Astronomy magazine plus all the rest of the books is a truly a massive amount of information that will undoubtedly serve the membership for years and years to come. Diane, for your giving us the gift of knowledge, once again, THANK YOU!

Denny Bodzash, *Guidescope* Editor

Classified Ads

Meade f/6.3 Focal Reducer / Field Flattener.

List Price: $199.00 -----My Price: $100.00 (includes shipping)

Contact John O' Neal at johnoneal@onealwebsite.com

An Astrophotographer's dream. Improves edge-of-field correction and reduces exposure times by close to 50%. Effectively reduces focal ratio by a factor of 0.63. Threads into rear cell of any Schmidt-Cassegrain. The f/6.3 Focal Reducer duplicates the rear cell thread of the telescope, allowing you to attach all standard rear cell visual and photographic accessories.

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What's Up Tonight?

Clouds Continue, Nights Shorten

By Denny Bodzash

The cloud season continues, but the nights are now getting shorter, and very noticeably so by the end of the month. Forget about any dusk observation of summer constellations, they're lost in the sunlight now. If anything, February is a transition month for observing. The fall constellations are low in the West by dark with the winter ones perfectly placed. Spring constellations are well up just before dawn. As the sky starts to brighten, look for the bright stars of the Summer Triangle in the East. The nights are still long and there is still a lot to see both visually and telescopically. Consult the sky chart, grab a warm coat, and explore the wealth of beauties the late winter sky has to offer.

On the planet front, there are some interesting sights to see this month. Be sure to catch Mercury at the start of the month, as it is rapidly falling from one of its best morning appearances of the year. Also, rapidly disappearing into the sun's light is Jupiter, which hangs about 15 degrees high in the West-Southwest at sunset in the beginning of the month. Appropriately for February, Venus is starting to

reappear in the West at dusk. It will get better and better as spring arrives. By the middle of the month, there will be some horizon testing planetary meetings low in the West involving Jupiter, Venus, and the Moon. Mars and Saturn are still all night objects, although Mars will be dimming this month.

There's a lot to see this month spanning from dusk to dawn if the clouds cooperate. So if the night is clear, go on out for a look.

February Visual Observing Highlights

Early February: catch Mercury in the morning and Jupiter in the evening before they're gone!
February 7: The Moon makes a close pass at Antares
February 9-10: The Old Moon is very near the Teapot in the dawn Southwest. This is a great time to observe the thin crescents as the ecliptic is almost flat by dawn
February 14: The Moon (just 17 hours past new), Venus, and Jupiter meet up low in the Southwest
February 15: A much easier young moon. Still nice thin crescents in the following few days.
February 16: Venus and Jupiter are 1/3 degree from each other. Grab the camera and telephoto lens!
February 21: The moon passes the Pleiades
February 25: The Moon, Castor, Pollux, and Mars are relatively close

February Events Calendar

Wednesday, February 3. Regular meeting at 7pm at the Carlisle Reservation in Carlisle Township. Topic: Non-astronomical telescopic sights by John Reising. RAIN OR SHINE.

Thursday. February 11: Board of Directors meeting at 7pm at the Blue Sky Restaurant in Amherst, Ohio, located on Route 58 North just past the Route 2 bridge. Board members are expected to attend, regular members welcome to attend and help us run the club. RAIN OR SHINE.

Thursday, February 12 (backup date Sat. 13). Public star party at the Nielsen. Featured sight: The cool winter Milky Way, 7-9pm, CLEAR SKIES ONLY

Friendly Advice. Dress warm! It's cold out there!

Fun Stuff

Red Stars for Valentine's Day

By Denny Bodzash

Stars are not all created equal. Two of the best ways to classify stars are by temperature and size. To do this, scientists use what is called the H-R Diagram, which classifies stars by both properties with height being size and horizontal being temperature. The following spectral classes by hot to cold are as follows: O, B, A, F, G, K, M. One popular way to remember the order is the phrase “oh, be a fine girl, kiss me,”or, for stressed students like I was until last fall, “oh boy, an 'F' grade kills me.” O type stars are the hot, blue supergiants like the belt stars of Orion while M class stars are “cool,” red stars. Below is a list of some M class stars that make for some great observation:

Barnhard's Star
Delta Virgo
Antares
Betelgeuse
Raselgethi B
Gamma Hydra
Anser (Alpha Vulpecula)
Giausar (Lambada Draco)
Gamma Sagittae
Mirach (Beta Andromeda)
Hydor (Lambda Aquarius)
Zubenhakrabi (Gamma Scorpius)
Propus (Eta Gemini)
Delta Virgo
Chi Aquarius
W Bootes
Eta Sagittarius
Omega Virgo
Herschel's garnet Star

This is just a partial list and is definitely not all the M class stars there are. For a complete list of the M stars (and other classes), follow this link:

http://stars.astro.illinois.edu/sow/class.html

Last but not least, here's a great comic. Thanks to Mike Gwynn for sharing.