Newsletter of
The Black River Astronomical Society
Guidescope

Lorain County, Ohio **February 2016**

Website: blackriverastro.org **Newsletter submissions:** Editor

Wednesday, February 3, 7 p.m., Regular meeting, Carlisle Reservation Visitors Center. Program: Using the Skygazer's Almanac, and My Latest Trip Out West, by Dave Lengyel

Thursday, February 11, 7 p.m., Board meeting, Blue Sky Restaurant, Amherst, Ohio

Friday, February 12 (backup Feb. 13), 7-9 p.m.: Public observing, Nielsen Observatory

Travel Travail Avoidance Reminder

Before planning to drive to a regular meeting or to a club observing session in this upcoming fun stretch of northern Ohio winter and post-winter, please check the club website blog before you leave to make sure that the meeting or session has not been canceled due to hazardous driving conditions.

Observing sessions may also be cancelled due to either hazardous driving conditions or to really crummy sky conditions, so please--save yourself an unnecessary trip or unnecessary risk to life and limb, and check that blog first. Updates are posted an hour or three prior to the scheduled event.

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BOARD SUMMARY January14, 2016

The January meeting of the BRAS Board of Directors was called to order at 7:04 p.m. with 10 Directors present. The Minutes from the December meeting were read and approved as was the Treasurer's report presented by Dan Walker.

Next came committee Reports. *Guidescope* editor Bill Ruth reported that the newsletter was status quo, although he could use more submissions from members. Anyone wishing to submit a short article should send it to Bill at the editor link. Lee Lumpkin reported that the website is running well with no known issues, and John Reising reported that the observatory and the instruments within were in good shape. There was no report from the OTAA or Metro Parks Liaison committee chairmen.

Programming is set through September as follows:

February	Dave Lengyel	Using the Skygazer's Almanac
March	John O'Neal	Solar topic TBA
April	John Reising	Mars Opposition and observing Mars
May	Rich Thompson	Iridium Satellites: history, use and future
June	Len Jezior	Understanding RA
July	Dennis Bodzash	10 Unsolved Mysteries of Astronomy and Cosmology
August	Barb Hubel	Spectroscopy
September	Dave Lengyel	BRAS member photos of the Transit of Mercury.

Under Old Business, the first topic was the “Dark Skies, Bright Kids” Program being presented by the Avon Lake Recreation Department. We have been asked to participate by having telescopes outside (if it is clear) and by giving short presentations and information inside. We will hand out star charts for February, give out information about the club and promote our Transit of Mercury program and the WorldWide Solstice Festival. The date is February 12, and the programs starts at 6:30 p.m. and ends at 8:30 p.m. We also have Public Observing on the same night (if it's clear) so we needed to coordinate who would open the observatory to the public and who would help out at Avon Lake.

The second topic was a small modification of our Solar Observing program for 2016. The dates we set are fine, but we wanted to shift locations to be at the LCMP Sandy Ridge Reservation in July and August, which has been done. Schauer then added the amended solar dates and all Public Observing dates to the BRAS calendar on the website.

The final item of Old Business was a discussion of the interactive solar displays/mini-workshops we have been using at the WorldWide Solstice Festival. These belong to John O'Neal who will be moving out of state sometime in the next year. We

believe these came from the Night Sky Network, to which we belong. If so, we will try to obtain some of these workshops for the club. Dan Walker volunteered to investigate this.

Next on the agenda was New Business. First up was a discussion of providing alternative programming on the nights when Public Observing was cancelled. The Board likes the concept in general, but there was a long discussion on how to implement such programming. We had received the suggestion that we show YouTube videos on astronomical topics in the observatory. This was discussed at length, but there were too many difficulties in doing so. The Board was of the opinion that the public is interested in viewing through telescopes because it is something they have likely never done before and is something they can't do at home. Viewing YouTube videos did not seem special or unique enough to attract the public and the Nielsen is not a good venue for holding meetings or showing videos. Other ideas were discussed and the idea is being kept on the back burner for discussion again at a later date, but for the present, Public Observing is being kept as is.

The second topic of discussion was our protocol for having impromptu observing sessions at the Nielsen. 2015 was a very cloudy and rainy year with many observing dates being cancelled and few good nights for observing, especially when the Moon was favorable. Thus, we have had few occasions to call impromptu observing sessions. Therefore, we want to remind members and Directors alike of our impromptu protocol. Any member of BRAS may request an impromptu session at the Nielsen on any clear night. It is best, however, if it is not a full Moon, as few people will likely attend. It is also desirable to have these on a weekend when possible. If members are registered BRAS Forum users, there is a section called “Observing” and under that is “Impromptu Observing”. All that is necessary is to write:”Is anyone interested in observing at the Nielsen tonight?” That request will automatically be passed on to all key holders and to everyone on the Forum who has requested such notifications. Then, if any key holder is available, the Forum will communicate with everyone signed up to get notifications, that we will be observing that night and the starting times. Currently over 30 BRAS members (out of about 50) are registered to use the Forum. People who are not registered can do so any time by going to the Forum home page and clicking on “Register” or by contacting Lee Lumpkin. Members can also contact the President, Steve Schauer via email at BRASPres@gmail.com to request an impromptu session. We will discuss this at the next couple of General Meetings.

The third item of new Business was the decision about whether to participate in Astronomy Day in 2016 or not. The issue was the date. Astronomy Day is set for Saturday May 14. We already have a commitment on Monday May 9th to show the Transit of Mercury across the Sun to the public that will last much of the day. Then on Sunday the 15th we were committed to Solar Observing. There was also some discussion that we wanted to revamp what we have been doing for Astronomy Day as we have had little participation in recent years. Thus the Board voted to skip Astronomy Day for 2016 and to reintroduce it next year.

The final item of business was a proposal to place a video feed from the Slooh website on the home page of our website. The Slooh program is a network of telescopes that the public can buy time on to do observing and the observing sessions are then made available to all via streaming video on their website. After much discussion, it was decided to investigate how this might look, but the feeling is to keep the website BRAS specific, and to perhaps put a link on the LINKS page to the Slooh website.

Dates for February were set, and the meeting adjourned at 8:34 p.m.

~Steve Schauer

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ASTRONOMY ON THE NET *February 2016*

I'm Len Jezior, BRAS member, amateur astronomer, photographer & general all-around techno-geek. Below are links and resources to timely and hopefully interesting, useful, new happenings in astronomy, astrophotography and cosmic discoveries in general.

To view, copy the URL and paste it in your favorite internet browser. Many PDF readers will allow you to click/hold on the URL to automatically connect. This month, I'd like to share the following...

A table of **deep-space objects** prominent for viewing by month.

TABLES: http://old.3ap.org/sigs/sigDeepSky.shtml

NASA **Juno Mission** reaches **Jupiter** in 2016. A Juno mission update.

URL: http://science.nasa.gov/missions/juno/

Asteroid Bennu very likely hit Earth in late 22nd century. **Mission Osiris-rex.**

URL: http://osiris-rex.lpl.arizona.edu/objectives/

Please note: In the process of collecting these links, the editor has brought it to my attention that there is a major problem in viewing YouTube videos. On testing, I found some videos play, others mostly don't, particularly on MS Windows platforms. Unfortunately, there doesn't seem to be an easy work-around without viewers purchasing an additional app to play them. This, of course, severely limits what I can share with you. With that in mind, I apologize for not catching this sooner and in best use of the *Guidescope*, I'm discontinuing further AOTN installments until I can find an easy fix. Thanks for viewing.

Here's to clear skies & good imaging.

~Len Jezior

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Wanted: Contributions to the *Guidescope*

If you have anything you'd like to share with the local amateur astronomy community via this newsletter please send it my way for inclusion in upcoming editions.

Anything astronomy-related is welcome, and either objective or subjective content is fine. An e-mail link for submissions is here.

Thanks in advance for your contributions.

Bill Ruth, Editor

I got up around 5:30 this morning (Jan. 15, 2016) and set up my iOptron Sky Tracker and took this photo of comet Catalina. It was not all that clear, with high clouds, but, what the heck, I was awake and set up, so I figured I'd give it a go.

The photo was 101s at f/5/6, 800 ISO and the lens was at 88mm using the Canon SL1.

The bright star is Alkaid, and at upper left is Mizar and Alcor. The comet is the greenish blob below and left of bright Alkaid.

It wasn't too cold, but my blacktop driveway was icy, so I had to be careful.

Not the greatest shot, but at least I got something.

~Dave Lengyel

Spring is Young Moon Season

While the Full Moon is often considered natural light pollution, the same astronomers who hate the full version may plan, days in advance, the perfect spot to sight a Young Moon just past new. So why the change in attitude?

Young Moons are, besides quite aesthetic, rare, very rare. To sight a Young Moon under 24 hours old (and even one under 30 hours old), all the conditions need to line up just right. If everything goes perfectly, on the day after New Moon, or even on the same day sometimes, just past sunset, a wire-thin crescent will pop out low on the horizon among the Sun's last rays. Needless to say, when dealing with a Moon less than 2% illuminated, binoculars are a must.

So here is why the Young Moon is so difficult to spot:

1. Timing. If New Moon is timed too close to sunset, it will be lost in the Sun's glare on the day of New Moon and will be way past a day old come the next night. A 36 hour Moon is no challenge, pure and simple.

2. Clouds. If it's cloudy, there's no seeing the Moon.

3. Light. Young Moon hunters are forced to fight twilight. With the Moon only 1-2% lit, just the act of spotting the Moon low on the horizon in such light conditions is a challenge because that is where the Sun is. A saving grace can be a nearby planet. If you can use a bright planet as a marker, it is a lot easier to estimate where the Moon will appear once the sky gets dark enough.

4. Haze. Even more so than during the day, haze makes its presence known at dusk, looking similar to wispy clouds on the horizon. While the biggest problem during the summer, haze can even appear in winter, too. Even a crystal-clear day can produce haze on the horizon at dusk. While the haze will quickly dissipate come dark, that's too late for the Young Moon.

These difficulties compounded with horizon issues and a limited window of time where it becomes realistic to catch them (February-May) showcase why Young Moons are the Holy Grail of lunar observers.

Now for the good news: spring is Young Moon season. Because of the near vertical ecliptic at sunset, the waxing Moon will hang higher in the sky now than any other time of year, which is good. For Young Moon hunters, February through May (even June depending on time of month) is an ideal time to look. By the time July rolls around, the ecliptic is undeniably flattening too much to make observing the Young Moon really feasible.

Get out while you can!

Future thin crescents:

February 9

March 9 (a true Young Moon)

April 8

May 7

~Denny Bodzash

Wondering about the Wonder of Astronomy

Wonder is defined by the Merriam-Webster as "a feeling caused by seeing something that is very surprising, beautiful, amazing….rapt attention or astonishment at something awesomely mysterious or new to one's experience." Wonder is often used when referring to childhood: childlike wonder, the wonder years. Children, innocent and carefree, are naturally gifted with the sense of wonder.

Children seeing the Moon, or a planet (especially Saturn), or the Sun, or any of the countless beautiful celestial objects through a telescope for the first time are filled with obvious wonder.

Adolescents and adults also may be feeling wonder when seeing amazing things through a telescope, although their reactions may be more subdued than those of children.

The number of people young and old who actively seek out the views a telescope provides is a minority. The reasons for this are many: the majority have other interests, or very demanding personal circumstances. A heavily-light-polluted sky doesn't help matters either.

And many people may lose the sense of wonder, for a time, or for a lifetime.

Loss of the sense of wonder could be pinpointed to myriad endless personal problems of adulthood: health, finances, family, job or lack thereof, misfortunes or reversals of fortune, losses and changes. Inside four walls, the mind can become a prison, and the prisoner--when not besieged by worries and worldly concerns--finds escapist distractions to fill the void left when the sense of wonder is absent.

"One night when I had tasted bitterness I went out on to the hill…." wrote Olaf Stapledon at the beginning of *Star Maker*, a strikingly relevant novel written in 1937 about a spontaneous out-of-body journey through the Universe. This journey took the protagonist from world-weary bitterness to wonder, and then some.

It's amazing that we amateur astronomers, adults with adult responsibilities and adult cares, knowing what we know about the adult world, coping with adult challenges ranging from annoying to tragic, still find it within us to go outside and look up, out, and around at the infinite magnificence surrounding us. The wonder we feel is a more mature wonder, tempered by experience. It's good to be close to the Earth again, at home on this wondrous planet and this wondrous Universe.

~Bill Ruth