

Newsletter of
The Black River Astronomical Society

Guidescope

Lorain County, Ohio

October 2019

Website: blackriverastro.org

Newsletter submissions: [Editor](#)

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--Wednesday, October 2, 7 p.m.: Regular meeting: Annual Meeting of the Members, Board Elections, and Videos, Carlisle Visitors Center

--Thursday, October 10, 7 p.m.: Board meeting, Blue Sky Restaurant, Amherst, OH

--Friday, October 18, 8-10 p.m.: Public observing, Nielsen Observatory (cloud backup date Saturday, October 19)

--Sunday, October 27, 1-4 p.m.: Solar observing, Sandy Ridge Reservation

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DUES ARE DUE in October. In a perfect world, all members renew their memberships at the October 2rd meeting, or go to the website in October to arrange to get their renewal to the treasurer by All Hallow's Eve.

Visit Our Website

Explore if you will the informative BRAS [website](#) and all its interesting, timely [links](#), and join the interactive members-only [BRAS Forum](#) to better keep in touch.

Guidescope Contributions Wanted

If you have any astronomical wanted/for sale announcements, photos, interesting article links, equipment reviews, observing reports, essays, or anything that you think to which the local amateur astronomy community could relate, please send them to your [humble Guidescope editor](#) for inclusion in forthcoming issues.

Board Summary September 12, 2019

The September Board meeting was called to order by Schauer at 7:05 p.m. at the Blue Sky Restaurant in Amherst with 10 Directors present. The minutes from the August meeting were read and approved as was the Treasurer's report. Committee reports followed with *Guidescope* editor Bill Ruth reporting that all was well with the newsletter, but that he could use more submissions. The website is believed to be operating as designed. Next came John Reising giving the Instrumentation report. John stated that the 56mm Plossl eyepiece looked like it was very dirty and may have had mold on it. The rear of the black C-14 also appeared dirty and he was going to go to the observatory and see what kind of cleaning could be done. He also reported that the cardboard box that the 56mm was in seemed damp and he wonders about dampness in the storage cabinet under the counter. It was suggested that we purchase a GoldenRod heater for the cabinet to keep it drier. These are rods that are placed at the bottom of a cabinet and get just warm enough to cause some heat to rise and force dampness out of enclosed spaces. These are often used in cabinets on boats or in gun safes. It was moved by Dan Walker and seconded by Greg Zmina, that Schauer order a GoldenRod to be installed the next time we are at the observatory (UPDATE: John Reising reports that the 56mm eyepiece

did NOT have any mold but was just dirty. He further stated that the C-14 itself was actually clean, but the focal reducer which is installed on the rear of the scope to change it from an f11 to an f5.6 was dirty. John cleaned both, reinstalled the focal reducer and put the 56mm in a plastic case rather than a cardboard box. The GoldenRod has arrived and will be installed soon). The OTAA chairman reported that we have two OTAA dates already set for 2020: MVAS on August 15, and BRAS on Sept. 19. We will set our 2021 OTAA date at the next Board Meeting.

Programming is as follows:

October	Staff	Elections and a short video
November	Dave Lengyel	Oberlin Planetarium and observing
December	Staff	Holiday Pot Luck at the LCMP Beaver Creek Reservation
<u>2020</u>		
January	OPEN	
February	OPEN	
March	Dave Lengyel	Measuring Distances in Astronomy
April	OPEN	
May	John Reising	Life of William Herschel
June	Denny Bodzash	Weird Ideas in Astronomy
July	OPEN	
August	John Reising	Mars Opposition and Observing Mars
September	Steve Schauer	Members Forum
October	Staff	Elections and a short video

Anyone interested in giving a talk at a General Meeting, please note that there are four open months where we are actively looking for a speaker.

Next came Old Business. The first item of discussion was assignments for our OTAA convention on Saturday September 28th. Tim Kreja will purchase hot dogs, lighter fluid and charcoal, and he has the grills which he will bring. Dan Walker will buy buns for the hot dogs and for the pulled pork. Jeff Walsh will buy bottled water and ice. Steve Schauer and Greg Zmina will bring coolers. Dianna Richardson will purchase chips and pretzels. Greg Cox will bring coffee, tea, creamer and sugar, plus the tub with the paper plates and plastic forks and spoons and napkins. Dan Walker will bring the cash box, some change and the tickets for door prizes. Mickey Hasbrook and Dan Walker will prepare the pulled pork which will be added to the menu this year. Jeff Walsh will buy condiments. John Reising will coordinate with our speaker Rob Owen from Oberlin College who will be speaking on Black Holes. Greg Cox will bring the framed club Charter. Steve Schauer will pick up the 70th Anniversary cake and will bring the club projector and a portable movie screen. Board members will report to set up at 3:00 p.m. with registration starting at 5:00, and dinner at 6:00.

New Business followed and the first item was a discussion about a work session at the

Nielsen. We need to set up a date in October to do the work necessary in order to get the new 16" Newtonian into operation and to move it into the new storage building. First we need to empty the storage boxes and the cabinets and decide what items to discard, what items to offer to club members or sell, what items to leave in the Nielsen and what items to move into the storage building. Next, we need to bring telescopes and other items that have been stored in peoples homes back to the Nielsen to be stored in the new building as well. We need to gather all club eyepieces together and decide what to keep, what to use as eyepieces for the loaner scopes and what to offer to club members as we want to purchase some new quality 2" eyepieces for use with the C-14s and the new 16". Eyepieces we are going to keep will also need to be cleaned and stored in a new case of some kind. Finally, we need to get the 16" telescope components out to the Nielsen and construct the telescope. John Reising states that Oberlin College has a set of Wheely bars that they are not using that we might be able to buy from them. We will check the size of the mount for the 16" to see what size bars are needed. If the Oberlin College bars won't work or they choose not to sell, we will need to order a pair in order to put the 16" into operation. The intent is for the 16" to be stored in the storage building and the scope rolled out through the overhead door and used on the concrete pad in front of the building.

The final item of new business was another quick discussion of the upcoming transit of Mercury across the surface of the Sun. This will occur on November 11th which is a Monday. It will be visible from Ohio, but November is typically a cloudy month. In order to have a better chance to see it, we are considering a trip to the Louisville, Kentucky area where the weather has a higher chance of being clear. Long time club member Randy Beachler lives in Lagrange, Kentucky which is between Cincinnati and Louisville, right off of Interstate 71. He has invited us to observe from a church parking lot in his beautiful town. The church overlooks a valley and thus is good for low horizon events like the transit. The idea is to make reservations in one of several motels in Lagrange and then watch the weather. If it will be acceptable in Ohio, we can cancel our reservations and observe from home. If the weather there looks better than here, we drive to Lagrange on Sunday to enjoy the transit the next morning. Schauer will get motel prices and other info and pass out this information at the October and November General Meetings and will put more info in the November newsletter.

Schauer also stated that the primary goal for the October Board meeting will be to set public and solar observing dates for 2020, so he will bring info on moon phases, meteor showers and other astronomical events we might want to plan around.

Dates were set, and the meeting was adjourned.

~Steve Schauer

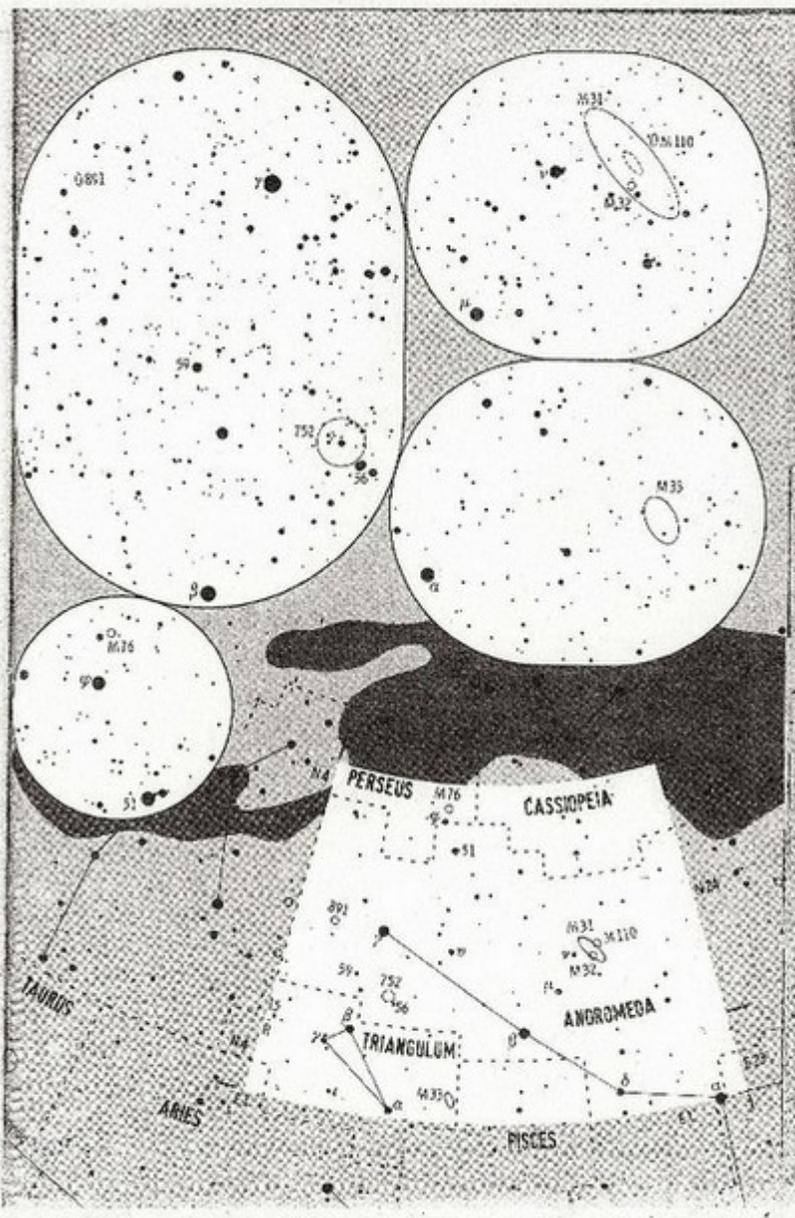
NO Northern Sky Fall Constellations

NEBULA	Position	v-Mag.	Size	Shape	Type	Vis.	Dist.	R.A.	Dec.
205 M110	And	8	12x10'	10'	E5' Glx	☑	3 Mly	0°40.4	41.69
221 M32	And	8	11	3.5	E2' Glx	☑	3 M	0 42.7	40.87
224 M31	And	4	13	150	Sb Glx	☑	3 M	0 42.7	41.27
598 M33	Tri	6	14	50	Sd Glx	☑	3 M	1 33.9	30.66
650 M76	Per	10	11	2.5	A PN	☑	4000	1 42.4	51.57
752	And	6	14	50	m OC	☑	1500	1 57.8	37.68
891	And	10	13	10	Sb Glx	☑	40 M	2 22.5	42.33

205 M110 Companion galaxy of the Andromeda Galaxy, slightly asymmetric.
 221 M32 Companion of the Andromeda Galaxy, almost stellar in binoculars.
 224 M31 **Andromeda Galaxy**, nearest large galaxy, physically comparable with our Milky Way, bright prominent core, dust lanes west of the core, outer spiral arms and great size visible only under dark sky.
 598 M33 **Triangulum Galaxy**, dark sky and low power essential, elongated glow in binoculars without a bright core; a telescope shows two or three spiral arms with emission nebulae and stellar associations.
 650 M76 **Little Dumbbell**, irregular shape, consists of NGC650 and 651.
 752 Difficult object with unaided eye, nicely resolved in binoculars.
 891 Faint edge-on galaxy, very elongated shape distinct in a telescope.

STAR	Position	V-Mag.	B-V	Tc.	Abs.	Name	Dist.	R.A.	Dec.
21 α	And	2.1	0.0	0	0	Alpheratz, Sirrah	98ly	0°08.4	29°09
31 β	And	3.3	1.3	1	1	.....	102	0 39.3	30.86
35 υ	And	4.5	-1	-2	.....	.....	650	0 49.8	41.08
37 μ	And	3.9	0.1	1	.....	.....	140	0 56.8	38.50
43 β	And	2.1	1.6	-2	.....	Mirach	200	1 09.7	35.62
50 υ	And	4.1	0.5	3	.....	.....	44	1 36.8	41.41
51	And	3.6	1.3	0	.....	.....	180	1 38.0	48.63
φ	Per	4.0	-1	-3	.....	.....	800	1 43.7	50.69
2 α	Tri	3.4	0.5	2	.....	Elmuthalleth	64	1 53.1	29.58
56	And	5.0	1.3	-2	.....	.....	320,900	1 56.0	37.26
57 γ	And	2.1	1.2	-3	.....	Alamak	370	2 03.9	42.33
4 β	Tri	3.0	0.1	0	.....	.....	125	2 09.5	34.99
59	And	5.6	0.0	1	.....	.....	300	2 10.9	39.04
6 ε	Tri	4.9	0.8	0	.....	.....	300	2 12.4	30.30
9 γ	Tri	4.0	0.0	1	.....	.....	120	2 17.3	33.85
15	Tri	5.1	1.1	-2	.....	.....	1000	2 35.8	34.70
R	Tri	6.0-10	1.3	-2	.....	.....	1000	2 37.0	34.26

BINARY	Position	V-Mag.	B	V	Tc.	Sep.	PA	Vis.	VARIABLE STAR
56	And	5.7	5.9	1.1	1.6	201"	.....	☑	R Tri []
57	And	2.2	4.9	1.4	0.0	9.6	.....	☑	Period 267 d
59	And	6.1	6.8	0.0	0.1	16.7	.....	☑	Max. 2451368
6	Tri	5.2	6.7	0.8	0.5	3.9	.....	☑	Min. Max. -150
15	Tri	5.4	6.7	1.6	0.2	142.2	.....	☑	Extrema 5.4 12.6



Thanks to John Reising for Constellation of the Month.

Deep-Sky Objects for October

Objects for Binoculars

RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
23 ^h 56.7 ^m	+61° 44'	NGC 7788	9.4v	9'		Cas	Open Cl 20• with 7790
23 ^h 57.0 ^m	+57° 44'	NGC 7789	6.7v	15'		Cas	Open Cluster 300•
23 ^h 58.4 ^m	+61° 13'	NGC 7790	8.5v	17'		Cas	Open Cl 40• with 7788
01 ^h 51.5 ^m	-10° 20'	Zeta	3.7, 9.9	187.0"	41°	Cet	Double Star
01 ^h 53.5 ^m	+19° 18'	Gamma (AC)	4.8, 9.6	221.3"	84°	Ari	D.S. (AB: 4.8,4.8; 7.8")
02 ^h 32.7 ^m	+61° 27'	Mel 15	6.5v	22'		Cas	Open Cl 40• (w E.neb IC1805)

Objects for Small Telescopes (2-6 inch)

RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
01 ^h 15.6 ^m	+58° 49'	NGC 436	8.8v	5'		Cas	Open Cluster 30•
01 ^h 44.1 ^m	+61° 53'	NGC 654	6.5v	5'		Cas	Open Cluster 60•
01 ^h 46.0 ^m	+61° 15'	NGC 663	7.1v	16'		Cas	Open Cluster 80•
02 ^h 03.0 ^m	+33° 17'	Iota	5.3, 6.9	3.9"	71°	Tri	Double Star
02 ^h 42.7 ^m	-00° 01'	M77	8.9v	8.2'x7.3'		Cet	Galaxy
03 ^h 57.9 ^m	+40° 01'	Epsilon	2.9, 8.1	8.8"	10°	Per	Double Star

Objects for Medium Telescopes (8-14 inch)

RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
00 ^h 14.1 ^m	-23° 11'	NGC 45	10.8v	6.3'x4.6'		Cet	Galaxy
01 ^h 47.9 ^m	+27° 26'	NGC 672	10.9v	6.6'x2.6'		Tri	Galaxy
01 ^h 59.3 ^m	+19° 01'	NGC 772	10.3v	7.3'x4.6'		Ari	Galaxy
02 ^h 08.4 ^m	+1° 00'	NGC 821	10.7v	3.3'x2.3'		Ari	Galaxy
02 ^h 27.3 ^m	+33° 35'	NGC 925	10.1v	12.0'x7.4'		Tri	Galaxy
02 ^h 30.8 ^m	+37° 08'	NGC 949	11.8	3.3'x2.1'		Tri	Galaxy
02 ^h 34.2 ^m	+29° 19'	NGC 972	11.4v	3.4'x1.6'		Ari	Galaxy

Objects for Larger Telescopes (16-inch & larger) Challenge Objects

RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
00 ^h 39.0 ^m	+48° 20'	NGC 185	9.2v	14.5'x12.5'		Cas	Galaxy
01 ^h 09.4 ^m	+35° 43'	NGC 404	10.3v	6.1'x6.1'		And	Galaxy
01 ^h 31.3 ^m	-06° 52'	NGC 584	10.5v	3.2'x1.7'		Cet	Galaxy
01 ^h 33.9 ^m	+30° 39'	M33	5.7v	67.0'x41.5'		Tri	Galaxy
02 ^h 09.4 ^m	-10° 08'	NGC 835	12.1v	1.9'x1.6'		Cet	Galaxy with 833, 838, 839
02 ^h 18.0 ^m	+14° 33'	NGC 877	11.9v	2.1'x1.7'		Ari	Galaxy with 870, 871, 876
02 ^h 39.2 ^m	+10° 51'	NGC 1024	12.1v	4.4'x1.6'		Ari	Galaxy with 1028, 1029

Print and use the [Deep-Sky Interest Group - Observation Form](#) to record your observations.

Select from a topic in the navigation bar on the left, or from the links below.

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Thanks to Len Jezior for deep sky object charts.

Storage Building Finished



Photo by Steve Schauer

The new storage building at the Nielsen Observatory is finished and, except for a couple of items on a punch list, is ready for us to move in. The building is a post frame type construct that is 12' wide and 16' long. The roof and sides are steel and have a 40 year paint warranty with a color to match the gray of the observatory. The roof has a 4/12 pitch and has a 12" overhang on all four sides with an aluminum soffit. The floor is concrete which butts up against the existing concrete pad, and there is a sidewalk from the existing pad to the "man door" on the side of the building. When pouring this concrete sidewalk, the MetroParks extended it along the side of the existing pad, making the pad three feet wider which is appreciated. Facing the pad is an 8' overhead door which locks from the inside with no handle on the outside. We will gain entry through the man door (which is on the west side of the building) and then open the overhead door from inside. Because the building is 10' high with a peak, there is room to add a storage loft in the rear of the building which could be used for bulky items we don't use often like shipping boxes or trunks. Once we get all of our equipment out at the Nielsen, we will then have an idea how to configure the inside with shelves as well as open space for telescopes to line up against the

walls. We can then build or buy shelves to meet our needs. We may also construct a fold-down desk near the overhead door with a red light over it upon which we could place star charts or a laptop or tablet. The MetroParks also added two electrical outlets on the front of the building facing the pad and two lights on the outside of the building, one of which will be red. There is an LED strip light on the inside with two electrical outlets. We are going to ask if this strip light can be placed on a dimmer switch (most LEDs can) and we still need a fixture for a red light inside. The building is on the west side of the Nielsen between the concrete pad there and the asphalt driveway that runs beside the observatory. The new 16" Newtonian telescope, (which we can now finish) will be stored in this building on Wheely bars and rolled out through the overhead door onto the concrete pad for use. We will have an article about the 16" in an upcoming issue of this newsletter, but it is on a motorized equatorial mount and is a "push to" with a hand controller. It is currently in pieces and will be assembled on-site now that the building is done, as it is much easier to transport the individual components than the finished telescope. The included photo of the building does not show the outside lights or the outside outlets, nor does it show the man door which is on the other side of the building. While we paid for the components of this building, the Lorain County Metro Parks did all the construction and wiring for us and has produced a beautiful building which will greatly enhance our observatory "home" and the cooperation between the two organizations has been outstanding. Our next Public Observing session is on October 18th with the 19th as our back-up date. Please come out and examine our new addition.

~Steve Schauer

BRAS Owns New Telescopes

On Sunday, September 22nd, the club received a text and email message from Mr. Mark Haff of Amherst, informing us that he had two telescopes he would like to donate. He has lived in Amherst much of his life and currently splits his time between Ohio and Florida. He has multiple telescopes in both locations and is looking to downsize a little. He has been friends with both Dan Walker and Dave Lengyel as well as Roy Klein and Ken Kopacz, so he reached out to us to see if we were interested. We were at Sandy Ridge doing solar observing at the time, but Steve Schauer responded to his email, and Dave Lengyel was kind enough to drive to Amherst and pick up the two telescopes. They are currently at the John Reising Home for Wayward Telescopes.

These telescopes are both Meade Newtonian scopes on German equatorial mounts. One is an 8" f6 and the other is a 10" f4.5, and, while they need focusers, are otherwise in excellent condition. The Board will have to discuss these scopes and get input from the membership as to their disposition. The question is whether we need two more scopes at the Nielsen or not, as we usually have more telescopes than we have people to use them at observing events. We may keep both, use both as extra-cost ticket door prizes at our 2020 OTAA convention, keep one and use one as a door prize, or we could sell one or both. We will provide Mr. Haff with a letter that places a value for the scopes for tax purposes as well as our thanks, as these are valuable telescopes.

Earlier in the year we also received a Celestron SkyProdigy 130 telescope with eyepieces, tripod and instruction manual. This is a 5" full go-to scope that is complete except for the fork arm to attach it to the tripod. We could place this scope on a heavy photographic tripod, but Steve Schauer will contact Celestron to inquire if the fork arm can be purchased as this would allow the scope to be used as a go-to. It would make an excellent loaner scope or a scope a novice observer could use during observing sessions, and, since it is compact, it would be easy to store. We will keep the membership informed about these new telescopes.

~Steve Schauer