

Newsletter of
The Black River Astronomical Society

Guidescope

Lorain County, Ohio

August 2018

Website: blackriverastro.org

Newsletter submissions: [Editor](#)

- * * * * *
- Wednesday, August 1, 7 p.m.: Regular meeting, Carlisle Visitors Center.
Topic: Solar Superstorms, EMP Attacks, and Hardening the Grid by Denny Bodzash
 - Friday, August 3, 10-midnight: Public observing, Nielsen Observatory (cloud backup date Saturday, August 4)
 - Thursday, August 9, 7 p.m.: Board meeting, Blue Sky Restaurant, Amherst, OH
 - Saturday, August 11, 5 p.m. - ?: Mahoning Valley Astronomical Society OTAA
 - Friday, August 17, 10-midnight: Public observing, Nielsen Observatory (cloud backup date Saturday, August 18)
 - Sunday, August 26, 1-4 p.m.: Solar observing, Sandy Ridge Reservation
- * * * * *

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 wanted/for sale announcements, astronomical photos you've taken, 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 July 19, 2018

The July Board of Directors meeting was called to order at 7:04 p.m. with seven Directors present. The minutes from the June meeting were read and approved as was the Treasurer's report. Committee reports followed. *Guidescope* editor Bill Ruth reported that the newsletter was status quo with some submissions coming in which are appreciated. The Website is operating as intended with no issues. Under Instrumentation, John Reising will repair the 2" diagonal from the 4" Unitron refractor. The Unitron is being used in place of the orange tube C-14 which is currently at Celestron for cleaning. With five major planets currently visible and Mars at opposition, we decided a refractor was the perfect instrument to use. Once the new storage building is finished, the refractor can be kept on its Unitron mount and easily carried out to one of the pads for use, which we are pleased about. It has been mothballed for too long. We currently have it mounted on a club-owned Celestron CG5 mount, but that needs to be polar aligned better and we need to find the correct power supply for it. The 2" diagonal mirror is in bad shape with the silvering deteriorated, so John will replace that mirror with one he has as a spare. The new 16" Newtonian was discussed at some length. All the components are there, but the telescope needs to be assembled and collimated. It was decided to organize the work, but to wait until the storage building is completed, and then assemble the scope on site rather than trying to move the assembled scope. With help, John can put the scope into operation in a day or so, and several Directors volunteered to help. We are hoping to have the 10'X16' storage building built by late fall. The Board also authorized Schauer to purchase two Telrad finders and one 4" extension base, one to be used on the Unitron and the other to replace a nonworking Telrad on the 12" Dob. We will probably need to purchase a third Telrad once the 16" is in operation. The OTAA committee chair reminded Directors that the MVAS OTAA is Saturday August 11th with registration starting at 5:00 p.m. and dinner

sometime after 6:00 p.m. The folks at MVAS are most welcoming, and it is hoped many BRAS members attend. The Metro Parks Liaison reported that Paul Rhyby of the LCMP is being kept in the loop about the C-14 repairs by Schauer and will authorize the repair once we have an estimate (UPDATE: Celestron has given us an estimate of \$411.00 to clean, lube, collimate, ship and insure the scope, and this estimate has been passed on to the Parks for approval. Once approved, it is hoped the work would be completed in a couple of weeks.)

Programing is set for the rest of the year with the exception of November which is open. Any member wishing to present a talk in November should contact any Board member or the President (BRASPres@gmail.com). The programs are as follows:

August	Denny Bodzash	Solar Superstorms, EMP Attacks and Hardening the Grid
Sept.	John and Dave	Planetarium show at the Oberlin College Planetarium (Peters Hall)
Oct.	Schauer	Elections and the Annual Meeting of the Members w/ short video
Nov.	OPEN	
Dec.		Annual Holiday Pot Luck Dinner at the LCMP Amherst Beaver Creek Reservation.

Old Business followed with the first item being a discussion of eclipse glasses. While it is too early to order a large quantity for the next solar eclipse in 2024, it was suggested that we buy a small quantity to sell at our monthly solar observing sessions. Jeff Walsh checked several sources and found glasses available for approx. 75 cents each if we bought 100 or less. When we discovered that Greg Cox still had approx. 30 pairs, it was decided not to purchase any at this time.

Elections were discussed next. Four Directors will have their terms expire: Greg Cox, Bill Ruth, Greg Zmina, and Dave Lengyel. Dave has decided not to seek reelection, so Dave's seat will be open as is the seat vacated by Lee Lumpkin last October. With two positions open, it is hoped that some members interested in helping the club will stand for election. Directors need to attend the monthly Board Meetings held on the second Thursday of each month at the Blue sky Restaurant in Amherst, and also attend and help out with as many club functions as possible. It is an opportunity to keep the club moving forward and improving, so anyone interested, please see any Board member or the President.

New Business came next. The first item was a discussion of two pieces of correspondence received by the President via the email address on the website. Both were from people with websites asking to have their sites linked to on our "Links" page. After some discussion, and after perusing both sites, it was decided not to create links to them from our site.

Next came a discussion about whether to purchase additional hot food to offer at our OTAA convention. It had been suggested that places like GFS and Costco sell five pound trays of food like lasagna that we could purchase, cook in the church kitchen and serve at dinner. Jeff Walsh was kind enough to get some prices from Costco, and Schauer had a couple from GFS, but after discussion, it was decided that we had plenty of food being brought in and the additional effort and expense wasn't necessary.

The final item of new business was a discussion of a date for next years BRAS OTAA convention. The best New Moon date would be Sept. 21st or the 28th. Schauer will coordinate with the CAA President, Bill Murman, in the hope of not selecting the same date as happened this year with

both our OTAAAs being on September 8th. The BRAS has used a date in September for over 30 years with CAA traditionally using a date in July. Due to scheduling conflicts the CAA has had getting their meeting facility, they moved to September last year. We moved our date last year so as not to conflict with them, but it wasn't possible to change our date this year as the Church Hall wasn't available. It is really desirable that the clubs support each other, not conflict, so if CAA isn't going to move back to July, it is hoped we can coordinate a date selection in September so we can enjoy each other's events.

August dates were set, and the meeting was adjourned at 8:45 p.m.

~Steve Schauer

How a Lunar Eclipse Changed History

Last month, the world was treated to a lunar eclipse. Unfortunately for us, it was on the other side of the world. While there was no historical significance to this eclipse, such is not always the case. The lunar eclipse of March 1, 1504 literally changed the course of history.

Christopher Columbus, re-discoverer (the Vikings were here first) of the New World and his crew, were in a bad way. With ships beached and supplies running short, Columbus had persuaded the natives of Jamaica to supply his men food, which they did. However, a few of Columbus' crew got greedy and were caught stealing from the natives, who then stopped the supply of food. By the end of February, the explorers were in dire straits.

However, there was one last hope--a book.

On one of the ships (they were grounded, not sunk) was an almanac by the astronomer Abraham Zacuto that covered the years through 1506. In the book, there were, among other things, predictions for eclipses. The ray of hope: there was set to be a lunar eclipse starting the night of February 29 and continuing past midnight into March 1.

People had long been troubled by eclipses in the age before science. Pre-Enlightenment people often saw eclipses as omens, and omens of misfortune almost exclusively. In fact, this continues today even in the age of science as evidenced by the 'blood moon' prophecy concerning four consecutive total lunar eclipses of just a few years ago. Taking his fellow Europeans' fear of eclipses, Columbus made a gamble.

Columbus met with the leader of the natives and warned the chief that the god of the explorers was very upset at the food supply having been cut off. As a sign, Columbus said that his god would make the Moon turn blood red.

While they were probably initially skeptical, the natives' skepticism turned to fear because, just as predicted, the Moon started to disappear and then reappeared--blood red. The natives then went to Columbus, promised him food, and begged him to intercede with God on their behalf and make the Moon go back to normal. Using an hourglass to time totality, Columbus, shortly before totality ended, told the natives that God had forgiven them.

Soon after, the Moon went back to normal and the rest, as they say, is history.

~Denny Bodzash

Deep-Sky Objects for August

Objects for Binoculars							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
20 ^h 18.1 ^m	-12° 33'	Alpha-1 & 2	3.6, 4.2	378"	291°	Cap	Double Star
20 ^h 21.0 ^m	-14° 47'	Beta Cap	3.4, 6.2	205.3"	267°	Cap	Double Star
20 ^h 23.9 ^m	+38° 32'	M29	6.6v	6'		Cyg	Open Cluster 50*
21 ^h 30.0 ^m	+12° 10'	M15	6.0v	12.3'		Peg	Globular Cluster
21 ^h 32.2 ^m	+48° 26'	M39	4.6v	31'		Cyg	Open Cluster 30*
21 ^h 33.5 ^m	-00° 49'	M2	6.4v	12.9'		Aqr	Globular Cluster
Objects for Small Telescopes (2-6 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
19 ^h 30.7 ^m	+27° 58'	Beta Cyg	3.1, 5.1	34"	54°	Cyg	Double Star, "Albireo"
19 ^h 44.8 ^m	+50° 31'	NGC 6826	8.8v	>25"		Cyg	"Blinking Planetary" Nebula
20 ^h 46.7 ^m	+16° 07'	Gamma Cyg	4.3, 5.1	9.6"	268°	Del	Double Star
21 ^h 43.5 ^m	+53° 47'	Mu Cep	3.4, 5.1	730 days	Var.*	Cep	"Herschel's Garnet Star"
22 ^h 15.3 ^m	+49° 53'	NGC 7243	6.4v	21'		Lac	Open Cluster 40*
23 ^h 11.5 ^m	+60° 34'	NGC 7510	7.9v	4'		Cep	Open Cluster 60*
Objects for Medium Telescopes (8-14 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
19 ^h 41.3 ^m	+40° 11'	NGC 6819	73.v	9.5'		Cyg	Open Cluster
20 ^h 22.4 ^m	+20° 05'	NGC 6905	11.1v	39'		Del	"Blue Flash" Plan. Neb.
20 ^h 23.1 ^m	+40° 52'	NGC 6910	7.4v	7'		Cyg	Open Cluster 50
20 ^h 45.7 ^m	+30° 43'	NGC 6960	-	70' x 6'		Cyg	"Veil Nebula", W. Segment"
20 ^h 56.4 ^m	+31° 43'	NGC 6992-95	-	60' x 8'		Cyg	"Veil Nebula", E. Segment
22 ^h 10.5 ^m	+52° 50'	IC 1434	9.0p	7'		Lac	Open Cluster 40*
Objects for Larger Telescopes (16-inch & larger) Challenge Objects							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
20 ^h 12.0 ^m	+38° 21'	NGC 6888	-	18' x 13'		Cyg	"Crescent Nebula"
20 ^h 16.4 ^m	+30° 34'	NGC 6894	12.3v	>42"		Cyg	Planetary Nebula
21 ^h 00.6 ^m	+54° 33'	NGC 7008	10.7v	83"		Cyg	Planetary Nebula
21 ^h 04.2 ^m	-11° 22'	NGC 7009	8.3p	>25'		Aqr	"Saturn Nebula"
22 ^h 54.3 ^m	+60° 50'	NGC 7419	13.0p	2'		Cep	Open Cluster 40*
00 ^h 44.4 ^m	+85° 20'	NGC 188	8.1v	13'		Cep	Open Cluster 120*

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

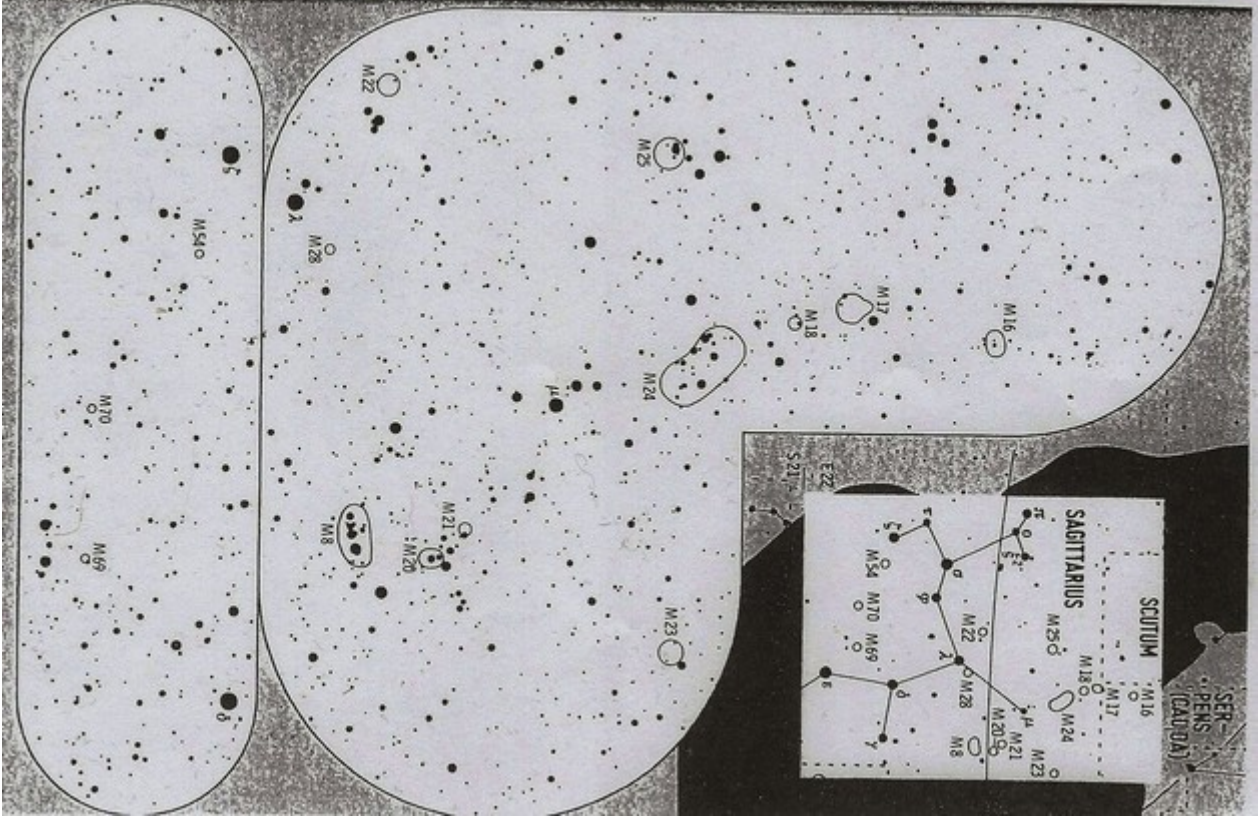
Thanks to Len Jezior for deep sky objects chart.

E20

Equator, Ecliptic Summer Constellations

NEBULA	Position	v-Mag.	Size	Shape	Type	Vis.	Dist.	R.A.	Dec.
6494 M23	Sgr	6	13/12'	25'	O-m	OC	2200 ly	17 ^h 56 ^m 8 ^s	-19°02'
6514 M20	Sgr	7	13	20	O Em	DN	6000	18 02.6	-23.03
6523 M8	Sgr	44	13	60	O Em	DN	6000	18 03.8	-24.38
6531 M21	Sgr	64	11	10	O m	OC	4000	18 04.6	-22.50
M24	Sgr	4	13	100	0Milky Way		8000	18 16.9	-18.48
6611 M16	Sgr	6	12	25	O Em	DN	7000	18 18.8	-13.78
6613 M18	Sgr	7	12	10	O P n	OC	4000	18 19.9	-17.13
6618 M17	Sgr	6	13	35	O Em	DN	6000	18 20.8	-16.18
6626 M28	Sgr	7	11	6	O IV	GC	20000	18 24.5	-24.87
6637 M69	Sgr	8	11	4	O V	GC	30000	18 31.4	-32.34
IC4725 M25	Sgr	5	12	30	O m	OC	2500	18 31.6	-19.23
6656 M22	Sgr	54	11	20	O VII	GC	10000	18 36.4	-23.90
6681 M70	Sgr	8	11	4	O V	GC	30000	18 43.2	-32.29
6715 M54	Sgr	8	11	4	O III	GC	80000	18 55.1	-30.48

STAR	Position	V-Mag.	B-V	Te.	Abs.	Name	Dist.	R.A.	Dec.
10 γ	Sgr	3.0	1.0	1	1 ^s	Alnasl	97 ly	18 05.8	-30.42
13 μ	Sgr	3.8	0.2	1	-7		4000	18 13.8	-21.06
19 δ	Sgr	2.7	1.4	-2		Kaus Media	300	18 21.0	-29.83
20 ε	Sgr	1.8	0.0	-1		Kaus Australis	145	18 24.2	-34.38
22 λ	Sgr	2.8	1.0	1		Kaus Borealis	78	18 28.0	-25.42
27 φ	Sgr	3.2	-1.1	-1			230	18 45.7	-26.99
34 ρ	Sgr	2.0	-1.1	-2		Nunki	220	18 55.3	-26.30
37 ζ	Sgr	3.5	1.2	1	-2		350	18 57.7	-21.11
38 ζ	Sgr	2.6	0.1	1	0		90	19 02.6	-29.88
39 ο	Sgr	3.8	1.0	1	1		140	19 04.7	-21.74
40 τ	Sgr	3.3	1.2	1	0		120	19 06.9	-27.67
41 π	Sgr	2.9	0.4	1	-3		430	19 09.8	-21.02



Thanks to John Reising for Constellation of the Month.



Mars, July 13, 2018

~Dave Lengyel