Lorain County, Ohio **July 2020**
Website: blackriverastro.org **Newsletter submissions: Editor**

Newsletter of The Black River Astronomical Society Guidescope

--Wednesday, July 1, 7 p.m.: Pahrump NV Trip, by Dave Lengyel (Zoom meeting only due to pandemic—passcodes will be sent out in separate email prior to meeting)

--Thursday, July 9, 7 p.m.: Board meeting (Zoom meeting only due to pandemic)

No public observing sessions in July due to pandemic

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, 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 it to your humble Guidescope editor for inclusion in forthcoming issues.

BOARD SUMMARY JUNE 11, 2020

The June Board of Directors Meeting was called to order by the President at 7:07 p.m. with seven Directors present. The minutes of the May meeting were not available due to the illness of the Secretary, who has thankfully recovered now. Dan Walker, our Treasurer, reported that we had no income and no expenses for the previous month, leaving us with a balance of $5099.73.

Committee reports followed with no report from the Guidescope editor. The website committee asked to present their report during New Business. The Instrumentation Chairman, John Reising, reported that he traveled to the observatory and replaced the focuser on the 10" Beadle Dobsonian, with one that will be more appropriate for that scope. He stated that the inside of the building was dry and clean, and the grass had been cut. The OTAA Chairman reported that the CVAS OTAA Convention that was set for June 13 had been cancelled due to the pandemic, and further stated that MVAS was almost certain that they would cancel their OTAA on August 15th. BRAS is taking a wait and see stance on the status of our convention which is set for September 12th, and we have not heard from CAA about their OTAA set for Sept. 19th. The Metroparks Liaison asked to defer his report to New Business.

Programing is as follows:

July	Dave Lengyel	Astronomy trip to Pahrump (Zoom meeting only)
August	John Reising	Mars Opposition
September	OPEN	
October	Elections/Annual Meeting of the Members/short video	
November	Dave Lengyel	Oberlin Planetarium at Oberlin or online via Zoom
December	Annual Holiday Pot Luck Dinner??? if conditions permit.	

Next came Old Business which went quickly as there were only two items.

Firstly, Schauer reminded Directors that we have elections in October with the Board terms of Tim Kreja, John Reising and Dave Levin set to expire. Reising and Kreja have indicated they will run again. The Board also needs to appoint someone to finish out the term of Mickey Hasbrook who has had to relocate to Atlanta for work.

The second item was a reminder for Directors to email the President a list of all club property that they might be keeping at home so we can update our inventory. All club members are likewise asked to email Schauer at BRASPres@gmail.com if they have any club property at home. Once we can update the inventory we can start moving equipment into the new storage building. Knowing exactly what we have will allow us to make good decisions on what kind of shelves to build or buy and how large a loft we need to construct. It is probably also time to sell, donate or discard some things that are cluttering

the observatory that we do not use.

Next came New Business. Some weeks ago, we were contacted by the person handling the estate of Roy Anderson, asking if we would like a donation of two telescopes. Roy was a long-time member of the club and a master machinist who built some fine telescopes. A few Saturdays ago, John Reising, Dan Walker, Laura Goyanes, and Mike Garrett drove to Euclid and retrieved two Newtonian reflectors. One is a 6” f10 tube assembly and the other is a 10” f8 tube. There is also an EQ mount for the six inch that Mike has kindly offered to refurbish. There were also some vintage Brandon eyepieces in a padded wooden box. The Brandons are a 4mm, a 6mm, and an 8mm, plus there is a 16.8mm Erfle. There was also a 25mm Edmund Plossl. The Brandons are not useful to us because of their focal lengths, but there is a collector’s market for vintage Brandon eyepieces so the Board voted to offer them for sale to help refill our depleted treasury.

The next item of new business was a report on the changes to our website. Our site administrator for many years was Lee Lumpkin, who also built the site. It has been housed on servers at Oberlin.net that were rented by Lee. Lee has asked to be removed as our administrator and to move the website to a server he does not “own”. Our Co-Administrator has been David Griffiths, who very kindly offered to take over as full-time administrator, since he already knew the site and had privileges there. The site has been moved to different servers, and our domain name has been registered in a new location that is cheaper. Bills for web hosting and domain name registration will now go directly to the Treasurer and a few minor changes have been made. If anyone tried to go to the website, and it doesn't load, please clear your cache and try again, as it is up and running normally in its new home. The President would like to thank Lee Lumpkin for many years of incredible service as our Administrator.

The Metro Parks Liaison next reported he has been in contact with the LCMP about using the observatory. There will be NO PUBLIC events there, until further notice, as per the Governor's edict of no gatherings of over ten people and the LCMP policy of canceling most public programs. However, we DO have permission to hold impromptu members-only star parties there under the following conditions:

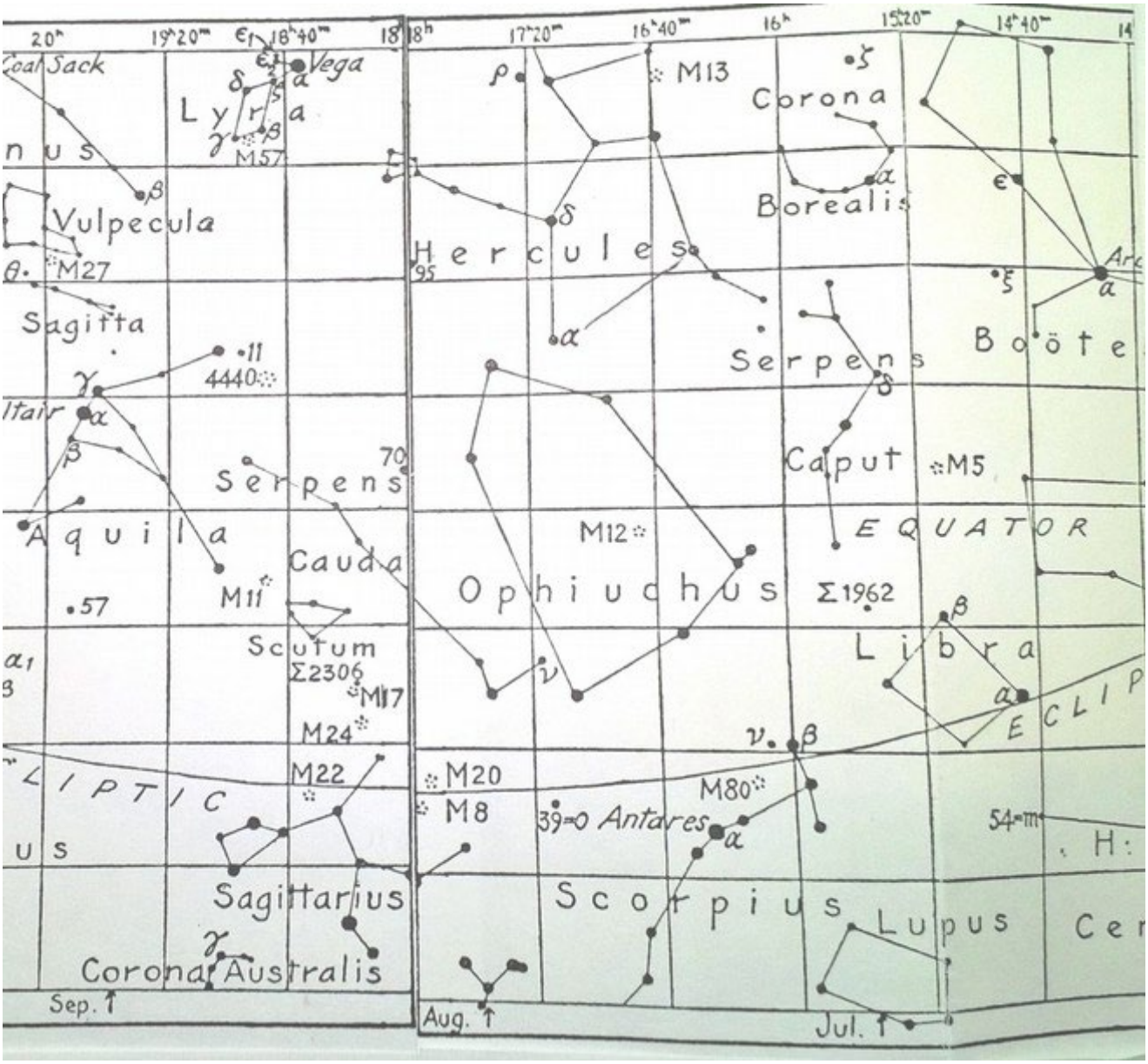
1. Club members only. No members of the public allowed.
2. A maximum of 10 members are allowed to attend per the Governor's mandate.
3. Members must wear masks unless 10' apart.
4. Members will use their own telescopes or will choose a club scope for their exclusive use that night. It would be that member's responsibility to sanitize the club scope and eyepiece/focuser/hand paddle before use.
5. No sharing of views...members only view through their own scopes.
6. The main desk at Carlisle should be called before 4:30 p.m. so that the Rangers know we will be there.
7. Members understand this gathering is at their own risk.

The final item of new business was a request from MVAS to have a Zoom speaker exchange as they needed a speaker for their June 27th meeting. We were interested, but all our speakers had conflicts that would render them unavailable on the 27th so we were unable to help out.

~Steve Schauer

Binary Beauties by John Reising

Below is a star chart and a short table with the names, locations and specifications for some of the brightest and easiest binary stars visible in the **summer evening sky.**



The list includes the following:

ADS number: From the ADS double star catalog.

Name: Greek letters, (mostly), or numbers with constellation.

Star Magnitudes: Primary star first & companion star next.

Separation, (“ = arc seconds): Distance between the primary and the companion star.

Included on the list are the following, which I consider as some of the absolute finest binary stars in the heavens:

(epsilon), e Bootes: First 2nd magnitude star up from Arcturus; One of my all time favorite binaries. Mags: 2.5 & 4.9; with a relatively close separation of 2.8 arc seconds and a stunning color contrast: orange primary & a greenish-white companion!! A real challenge for smaller scopes because of the glare and magnitude difference between the two;

(delta), d Serpens: A rather inconspicuous binary just below the head of Serpens; 2 white stars Mags: 4.1 & 5.2; with a 3.9 arc second separation.

(Beta), β Scorpio: The top star of Scorpio's claws; A blue-white / white pair of stars; Mags: 2.6 7 4.9 with an easy 13.7 arc second split;

(Nu), v Scorpio: Just north east of Beta Scorp; A nifty double-double of white with the following mags & splits:

A-C	4.0 & 6.3	41.0 arc seconds
A-B	4.4 & 5.4	1.4 arc seconds
C-D	6.7 & 7.8	2.6 arc seconds

The A-B pair is especially challenging due to its low altitude.

(Alpha), α Scorpio:"Antares"! A magnificent pair of red and blue stars with considerable magnitude difference, (1.0 & 5.5), and a rather tight separation, (2.8 arc seconds); Perhaps the ultimate challenge from Ohio due to its low position in the sky;

(Alpha), α Hercules: A magnificent pair of yellow and red stars with considerable magnitude difference, (1.0 & 5.5), and a somewhat tight separation, (4.4 arc seconds). A challenge in small telescopes;

(Rho), p Hercules: Two Jewels!! A blue-white / white pair of 5th magnitude stars. Again, a challenge in even the small telescopes!

(Epsilon), ε Lyra: "The Double Double"!A stunning pair with a golden yellow primary coupled with a fainter blue-blue companion. As above, good in any size scope, although a little more of a challenge compared to the two above.

(Beta), β Cygnus: "Albireo": One of the most beautiful and easiest to locate double stars in the heavens. The bottom star of the "Northern Cross" part of Cygnus, Albireo sports a 3rd magnitude orange primary with a 5th magnitude blue companion at a large separation of 35 arc seconds.

(Gamma), χ Delphinus: The furthest left or tip star of the diamond shaped part of the small constellation of Delphinus above an left of bright Altair. A beautiful pair with a 4th magnitude yellow primary and a 5th magnitude white companion separated by 9 arc seconds.

Deep-Sky Objects for July

Objects for Binoculars							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
$18^h 03.8^m$	-24° 23'	M8	6.8v (oc)	45'x30'		Sgr	"Lagoon Neb." + Cl. 113•
$18^h 16.5^m$	-18° 50'	M24	4.6v	95'		Sgr	Sm Sagittarius Star Cloud
$18^h 36.4^m$	-23° 54'	M22	5.1v	24'		Sgr	Globular Cluster
$19^h 59.6^m$	+22° 43'	M27	7.3v	348"		Vul	Pl. Neb. "Dumbbell Nebula"
$18^h 51.1^m$	-06° 16'	M11	5.8v	13'		Sct	"Wild Duck Cluster"
$19^h 25.4^m$	+20° 11'	Cr399	3.6v	60'		Vul	Cluster 40•, "Coathanger"

Objects for Small Telescopes (2-6 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
$18^h 02.3^m$	-23° 02'	M20	-	20'x20'		Sgr	"Trifid Nebula"
$18^h 20.8^m$	-16° 11'	M17	Cl. 6.0v	20'x15'		Sgr	"Omega/Swan Neb" + Cl.
$18^h 24.5^m$	-24° 52'	M28	6.8v	11.2'		Sgr	Globular Cluster
$18^h 45.2^m$	-09° 24'	M26	8.0v	14'		Sct	Open Cluster 30•
$18^h 53.6^m$	+33° 02'	M57	8.8v	>71"		Lyr	Pl. Neb. "Ring Nebula"
$19^h 08.8^m$	+34° 46'	E2470	6.6, 8.6	13.4"	272°	Lyr	Double Star, w/E2474
$19^h 09.1^m$	+34° 36'	E2474	6.7, 8.8	16.2"	262°	Lyr	Double Star, w/E2470

Objects for Medium Telescopes (8-14 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
$16^h 04.4^m$	-11° 22'	Xi Sco	4.8, 7.3	7.6"	51°	Sco	Double Star, w/E1999
$18^h 18.4^m$	-18° 25'	NGC 6603	11.1p	5.0'		Sgr	Open Cl. In M24
$18^h 44.3^m$	+39° 40'	Epsilon Lyr	5.1, 5.4	2.6", 2.3"		Lyr	"Double, Double" Star
$19^h 16.6^m$	+30° 11'	M56	8.3v	7.1'		Lyr	Globular Cluster
$19^h 18.4^m$	+06° 33'	NGC 6781	11.4v	109"		Aql	Planetary Nebula
$19^h 52.2^m$	+29° 25'	NGC 6834	7.8v	5'		Vul	Open Cluster 50•
$19^h 53.8^m$	+18° 47'	M71	8.0v	7.2'		Sge	Globular Cluster

Objects for Larger Telescopes (16-inch & larger) Challenge Objects							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
$18^h 17.6^m$	+36° 46'	Eta Sgr	3.2, 7.8	3.6"	105°	Sgr	Double Star
$18^h 31.4^m$	+32° 21'	M69	7.6v	7.1'		Sgr	Globular Cluster
$18^h 42.2^m$	-32° 18'	M70	8.0v	7.8'		Sgr	Globular Cluster
$18^h 55.1^m$	-30° 29'	M54	7.6v	9.1'		Sgr	Globular Cluster
$19^h 14.6^m$	-02° 42'	NGC 6772	12.7v	>62"		Aql	Planetary Nebula
$19^h 30.6^m$	+20° 16'	NGC 6802	8.8v	3.2'		Vul	Open Cluster 50•
$19^h 31.6^m$	-09° 13'	NGC 6804	12.0v	31"x66"		Aql	Planetary Nebula

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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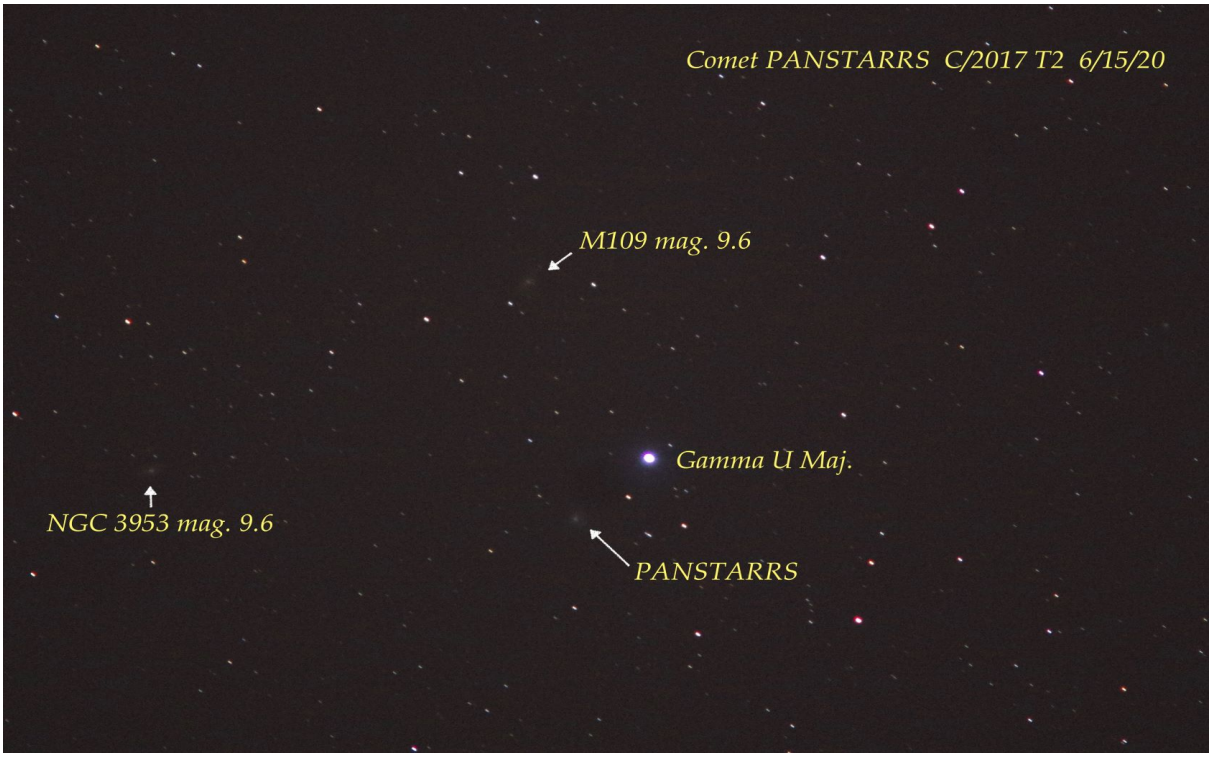
Thanks to Len Jezior for deep sky objects charts.



~Dave Lengyel

It was quite clear last night 6/24/20 so I guess the Sahara Dust hasn't reached us. I used the Larryscope with my Pentax to get a few shots. I do wish it would get darker a little sooner.This is M8 and M20 from my back deck, 3200 ISO, 350mm, 30s, astrotracer. ~Dave Lengyel

M22 and NGC6642, 6/24/20 ~Dave Lengyel