



* * * * *

--Wednesday, May 6, 7 p.m.: Zoom meeting presentation only due to pandemic: The Life of William Herschel, by John Reising. Zoom login information will be sent prior to the meeting.

--Thursday, May 14, 7 p.m.: Board meeting via Zoom due to pandemic

No public observing sessions in May 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 astronomically-related wanted/for sale announcements, astronomical photos you've taken, interesting astronomically-related article links, equipment reviews, observing reports, essays, or anything to which you think the local amateur astronomy community could relate, please send it to your humble Guidescope editor for inclusion in forthcoming issues.

BOARD SUMMARY

April 8, 2020

The April Board of Directors Meeting was called to order by Schauer at 7:11 p.m. via the Zoom Meeting app being used due to the COVID-19 virus pandemic, with eight Directors and two guests (Lengyel and Lumpkin) present. There was no March meeting due to the pandemic “stay at home” order and the fact that we had not set up Zoom yet. The February Board minutes had been emailed to Directors by Bill Ruth and were read and approved as was the Treasurer’s report. Committee reports followed with the *Guidescope* editor reporting that all was well and that there were some submissions. The website is reported to be operating as planned and Dan Walker reported that he had consulted with Lee Lumpkin on how to update the Observers Calendar and the *Guidescope* on the website. These are now up to date. Thank you Lee and Dan! John Reising, our Instrumentation Chairman, reported that he had checked on the observatory and storage building and they were in good shape despite not being used due to the virus outbreak. At our last Public Observing session before the “stay at home” order, the new 16” Newtonian was used, and John reported that the straps we are using as mounting rings to attach the tube to the mount do not allow the tube to be rotated. This is a problem on a telescope of this size as the eyepiece is often in a very awkward position, unless the tube can be rotated. There was a discussion on how to solve this issue, and several avenues will be explored. One is to see if Greg Cox can custom machine some rotating rings for us. John will contact Greg about this. A second is to seek Meade rings via various online sales outlets, eBay, and also putting a “Wanted” add online. A third is to look for rings elsewhere. Update: Greg Zmina discovered that the Parallax Company custom makes rings for the 16” Meade for \$549, so this is an option if we can’t find used rings. We still need to have several work parties at the observatory to clean up, and to organize and move items to the new storage building. This work is all on hold until such time as we can have meetings again. The OTAA Chairman reported that the Chagrin Valley Astronomical Society OTAA convention is still set for June 13th at Observatory Park. It is unknown at this time if that will have to be postponed or not due to the pandemic. The Metro Parks Liaison reported that the LCMP has been informed that we have cancelled all our events for May, and they will add those cancellations to their website. All MetroParks buildings, restrooms and playgrounds are currently closed and all public events are cancelled until further notice. The reservations themselves are open, but people are asked to observe social distancing or the parks themselves may also be closed.

Programming is as follows:

May	Meeting online via Zoom	John Reising	Life of William Herschel
June	Meeting online via Zoom	Denny Bodzash	Weirdest Ideas in Astronomy (tentative)
July		Dave Lengyel	Astronomy trip to Death Valley
August		John Reising	Mars Opposition
September	OPEN		
October	Elections and Annual Meeting of the Members/short video		
November		Dave Lengyel	Visit to the Oberlin College Planetarium
December	Annual Holiday Pot Luck Dinner at the LCMP Amherst Beaver Creek Reservation		

Old Business came next. The first item was a reminder that we have elections in October and that the Board terms of Tim Kreja, John Reising, and Dave Levin will be expiring; they need to inform the President if they wish to run for reelection. Since Mickey Hasbrook has had to move to Atlanta for work, we also need to appoint someone to finish out her term. Any club member interested in becoming a Board member should contact any officer or the President at BRASPres@gmail.com.

There was additional discussion about scope rings for the 16" and Reising will consult with Greg Cox and also place a want ad in AstroMart and Cloudy Nights. We also need a Meade power cord for the 16".

Next came New Business. The first item was a report by Schauer that the May 16th Metro Parks Adventure Fest was rescheduled for September 26th at the Burr Oak Reservation. Since we will be doing solar observing there, we will cancel the October 4th solar session planned for Sandy Ridge. Secondly, the Sunset Beach Festival at Lakeview Park, which we attend, will be scheduled for August 29th from 4:00-8:30 p.m.

The third item of new business was a report from Dave Lengyel, who is trying to find a new home for the Mason telescope. The Mason is a 12" scope hand built by William Mason, one of our club's founders. Mason was a well-known telescope maker and astronomer who corresponded with astronomers all over the world in the years before and after the Second World War. The Mason is made of sand cast aluminum in a Cassegrain configuration and is an important part of our club's history as well as a fine instrument. It is on a fork mount and the scope is sufficiently heavy that it needs to be permanently mounted, probably in an observatory of some kind. We only want this telescope to go to a club member, so if anyone is interested, please contact the President.

Wendy Tully is interested in donating a telescope to anyone who will use it. It is a 4-1/2" Tasco Reflector model 11T 900mm f8 on a German Equatorial Mount with slow motion controls with a 5X24 finderscope. It is part of their Halley's Comet series and was their top of the line telescope. It comes with four 0.96" eyepieces: 4,6,12,20 mm, plus a Moon filter and the instruction manual. This would be an excellent starter telescope, and is free. Anyone interested, please contact Steve Schauer at BRASPres@gmail.com and he will put you in contact with Wendy who lives in North Ridgeville.

Finally, Sven Nielsen contacted the club to remind us that our nonprofit status with the State of Ohio had expired. Treasurer Dan Walker investigated and found out that the renewal forms were mailed to John Reising after John had moved and were not forward to him, and thus were cancelled. Dan filled out the forms to renew our status as a nonprofit organization, changed the address so that it is current and paid the fee for reinstatement. Thanks Dan, and Sven. Thanks also to Dave Lengyel for hosting our General and Board meetings on the Oberlin College Zoom account so that our meetings could last longer than 40 minutes.

The May dates were set, and the meeting was adjourned at 8:05 p.m.

~Steve Schauer



Venus in daylight, 5 p.m. 4/27/2020 from Bratenahl Place. ISO 125 539mm f/8 shutter speed 1/500 ~Laura Goyanes



Venus and the Pleiades, along with the Hyades to the left on 4/3/20. Pentax K3ii with Astrotracer and 44s exposure on a stationary tripod. ~Dave Lengyel

Deep-Sky Objects for May

Objects for Binoculars							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
12 ^h 30.0 ^m	+51° 32'	7 CVn	6.2, 10.4, 9.0	AB 109°, AC 229°	AC 172°, AB 327°	CVn	Triple Star
13 ^h 15.8 ^m	+42° 02'	M63	8.6v	13.5'x8.3'		CVn	"Sunflower" Galaxy
13 ^h 23.9 ^m	+54° 54'	79 & 80 UMa	2.3, 4.0	708.7"	71°	Uma	Double Star, "Mizar & Alcor"
13 ^h 29.9 ^m	+47° 12'	M51	8.4v	8.2'x6.9'		CVn	"Whirlpool Galaxy"
13 ^h 42.2 ^m	+28° 23'	M3	5.9v	16.2'		CVn	Globular Cluster
Objects for Small Telescopes (2-6 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
12 ^h 17.5 ^m	+37° 49'	NGC 4244	10.4v	17.0'x2.2'		CVn	Galaxy
12 ^h 19.0 ^m	+47° 18'	M106	8.4v	20.0'x8.4'		CVn	Galaxy
12 ^h 56.0 ^m	+38° 19'	12-Alp a	2.9, 5.5	19.4"	229°	CVn	Double Star, "Cor Caroli"
13 ^h 12.9 ^m	+18° 10'	M53	7.5v	12.6'		Com	Globular Cluster
13 ^h 23.9 ^m	+54° 56'	79 Zeta	2.4, 3.9	14.4	150°	Uma	Double Star
Objects for Medium Telescopes (8-14 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
10 ^h 19.9 ^m	+45° 33'	NGC 3198	10.3v	9.2'x3.5'		UMa	Galaxy
11 ^h 11.5 ^m	+55° 40'	NGC 3556	10.0v	8.1'x2.1'		UMa	Galaxy
11 ^h 57.6 ^m	+53° 23'	M109	9.8v	7.6'x4.3'		UMa	Galaxy
12 ^h 13.8 ^m	+14° 54'	M98	10.1v	9.1'x2.1'		Com	Galaxy
12 ^h 22.9 ^m	+15° 47'	M100	9.3v	6.2'x5.3'		Com	Galaxy
12 ^h 25.1 ^m	+12° 53'	M84	9.1v	5.1'x4.1'		Vir	"Galaxy, with N4388, N4387"
12 ^h 26.2 ^m	+12° 57'	M86	8.9v	12.0'x9.3'		Vir	"Galaxy, with N4388, N4387"
Objects for Larger Telescopes (16-inch & larger) Challenge Objects							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
10 ^h 18.3 ^m	+41° 25'	NGC 3184	9.8v	7.8'x7.2'		UMa	Galaxy
11 ^h 14.8 ^m	+55° 01'	M97	9.9v	194"		Uma	Planetary Nebula "Owl"
11 ^h 18.8 ^m	+14° 25'	M99	9.9v	4.6'x4.3'		Com	Galaxy
12 ^h 36.3 ^m	+25° 59'	NGC 4565	9.6v	14.0'x1.8'		Com	Galaxy
12 ^h 36.6 ^m	+11° 14'	NGC4567-68	10.8, 11.3	4.7'x2.2'		Vir	Galaxies, "Siamee Twins"
12 ^h 40.0 ^m	-11° 37'	M104	8.0v	7.1'x4.4'		Vir	"Sombrero Galaxy"
12 ^h 56.7 ^m	+21° 41'	M64	8.5v	9.2'x4.6'		Com	"Black Eye Galaxy"
14 ^h 03.2 ^m	+54° 21'	M101	7.9v	26.0'x26.0'		UMa	Galaxy

Print and use the Deep-Sky Interest Group - Observation Form to record your observations.

May Deep Sky Object chart courtesy of Len Jezior.

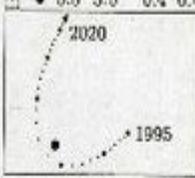
E12 Equator, Ecliptic Spring Constellations

NEBULA	Position	v-Mag.	Size	Shape	Type	Vis.	Dist.	R.A.	Dec.
4361	Crv	10 11/1'	1.2	○ D	PN	☑	4000ly	12 ^h 24.5	-18.79
4590	M68	Hya	8 13	10	○ X GC	☑	30000	12 39.5	-26.74
4694	M104	Vir	8 1/2	8	Sa Glx	☑	50 M	12 40.0	-11.62
4697	Vir	9 1/2	11	2.5	○ E6 Glx	☑	60 M	12 48.6	-5.80

- ✓4361 Faint planetary, requires high power; the central star is only mag. 13.
- ✓4590 M68 Resolved only in a telescope, but then even in the very center.
- ✓4594 M104 **Sombrero Galaxy**, very elongated, spindle shape barely visible in binoculars, impressive in a telescope, dust lane nearly right through the center, small double core; a chain of stars lies 25' to the west.
- 4697 Small, elongated, contains a stellar nucleus, otherwise featureless.

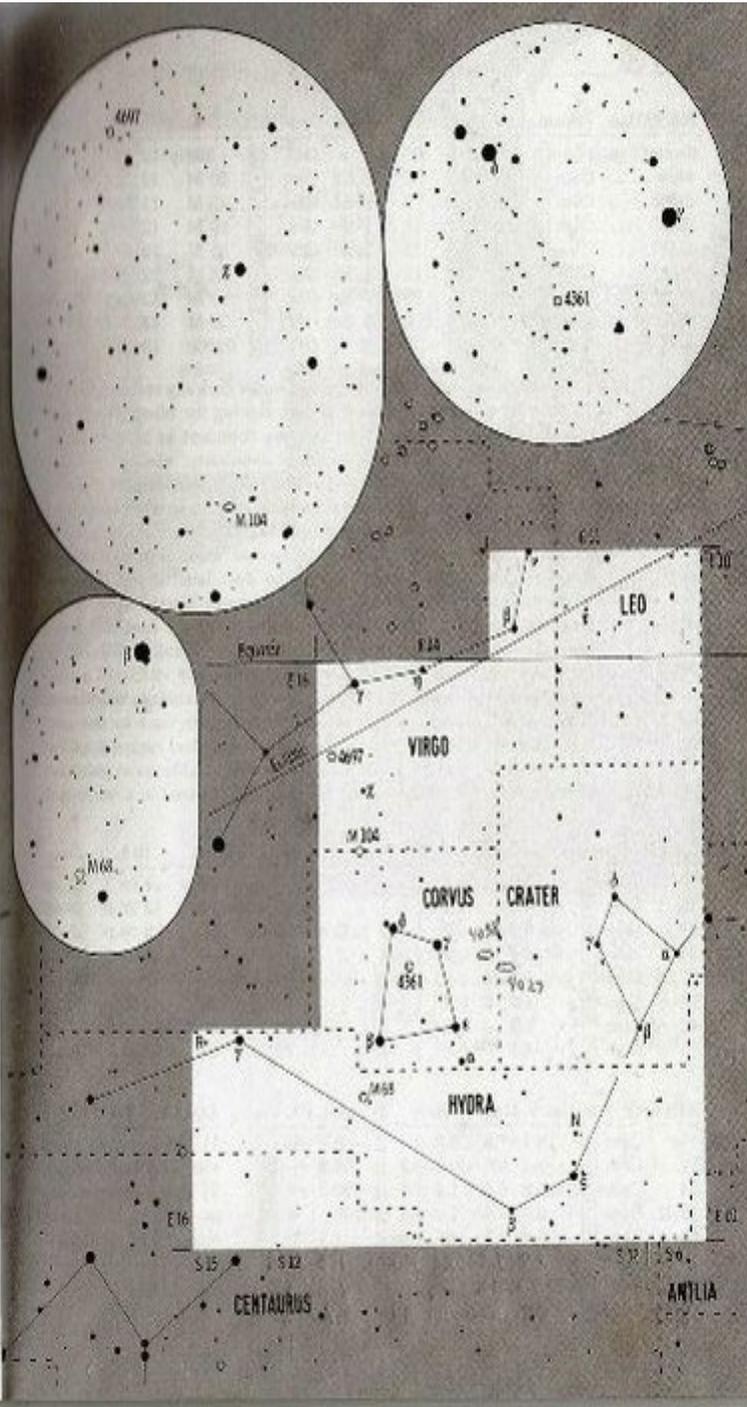
STAR	Position	V-Mag.	B-V	Tc.	Abs.	Name	Dist.	R.A.	Dec.
7 α	Crv	4.1	1.1	0	Alkes	180ly	10 ^h 59.8	-18.30	
11 β	Crv	4.5	0.0	0		260	11 11.7	-22.83	
12 δ	Crv	3.6	1.1	0		290	11 19.3	-14.78	
15 γ	Crv	4.1	0.2	2		84	11 24.9	-17.68	
84 γ	Leo	4.9	0.9	2		600,1000	11 27.9	2.85	
N	Hya	4.9	0.5	3		87	11 32.3	-29.26	
ξ	Hya	3.5	0.9	1		130	11 33.0	-31.86	
3 ζ	Vir	4.0	1.5	-1		300	11 45.9	6.53	
5 θ	Vir	3.6	0.5	3	Zawijava	35.5	11 50.7	1.76	
β	Hya	4.3	-1	-1		360	11 52.9	-33.91	
1 α	Crv	4.0	0.3	3	Aichiba	49	12 08.4	-24.73	
2 ε	Crv	3.0	1.3	-2		300	12 10.1	-22.62	
4 γ	Crv	2.6	-1	-1	Gienah	165	12 15.8	17.54	
15 η	Vir	3.9	0.0	-1	Zaniah	260	12 19.9	-0.67	
7 ζ	Crv	2.9	0.0	1	Algorab	88	12 29.9	-16.82	
9 θ	Crv	2.7	0.9	-1		140	12 34.4	-23.40	
26 χ	Vir	4.6	1.2	0		310	12 39.2	-8.00	
29 γ	Vir	2.7	0.4	2	Porrina	39	12 41.7	-1.45	
46 γ	Hya	3.0	0.9	0		132	13 18.9	-23.17	
R	Hya	-4.9-9.0	1.6	-2		800	13 29.7	-23.28	

BINARY	Position	V-Mag.	B-V	Tc.	Sep.	PA	Vis.
84 γ	Leo	5.0	7.5	1.0	0.4	11 89°	☑
N	Hya	5.6	5.8	0.5	0.5	11 9.5	☑
29 γ	Vir	3.5	3.5	0.4	0.4	11 0 1.5	☑



74 D CORV 3-8 1/2 A0 BK2 242 2M
 V Crv 4-9 A7 A1 52 96

VARIABLE STAR	Period	Extrema	Notes
R Hya	387 d	Max. 2451330	The period has been decreasing; it was close to 500 days during the early 1700s.



Constellation of the Month courtesy of John Reising.



Venus/Pleiades conjunction 4/2/20 (above) and 4/3/20 (below).

~Denny Bodzash





Mars, Saturn, Jupiter, Moon, April 16, 2020

~Dave Lengyel



Dawn 4/19/20 Waning moon and morning planets taken from rooftop deck at Bratenahl Place
~Laura Goyanes



Moon, Venus, Auriga 4/26/20

~Lee Lumpkin

1665: Newton Makes Lemonade out of a Lemon

It was the fall of 1665 and Issac Newton, BA from Cambridge University fresh in hand, was looking to continue his academic studies with his first semester of postgraduate work. However, young Newton's plans would be thwarted in the form of the Great Plague of London, which, like today, forced a near-shutdown of society.

With no classes to attend, Newton returned to his home, the small hamlet of Woolsthorpe by Belvoir, located over 100 miles from London, ground zero for the Plague. Recognized as above average in intelligence in childhood, Newton got a lucky break when his uncle, a minister who had studied at Cambridge, got him into Cambridge on a recommendation. As surprising as it may seem, Newton was not a standout student at university and did not receive a full scholarship until 1664, his junior year, which would carry him through four years or a MA, whichever came first. Until that point, Newton had to make time to work for a living while studying, much the same as most college students have to do today.

In spring, 1665, Newton earned his BA and was undoubtedly looking forward to carrying on with his studies come the following fall semester.

Meanwhile, while Newton was planning his future, there was dire news from the Continent. The Plague, which first appeared as the infamous Black Death of the mid 1300s, was flaring up in pockets again. As reports of Plague reached London in the early 1660s, officials instituted quarantine policies for ships coming from nations reporting Plague. However, the Plague eventually made it ashore and into London.

The problems with placing the origin of the Great Plague are many. First, since the wave that was the Black Death swept through Europe in the mid-1300s, following outbreaks of Plague were in isolated pockets, not massive waves. This resulted in cities and their doctors being able to go generations in some cases without seeing a single case. In a similar vein, early symptoms of Plague could be mistaken for more common, though still dangerous, diseases. The telltale sign, swollen lymph nodes (buboes) that collected blood and then turned black, did not develop until the late stages of the disease. Additionally, there was no standard training for doctors at the time. In fact, anyone selling herbal remedies could title themselves as 'doctor.' Lastly, there was no law requiring deaths to be reported at the time, which meant that people could have been dying from some unknown disease (the Plague) before news spread by word of mouth to city officials.

In any event, the Great Plague would claim the lives of an estimated 100,000 Londoners over the course of 18 months, almost a quarter of the city's population at the time. Ironically, the event that may have hastened the departure of the Plague may have been the Great Fire of 1666, which burned most of the city to the ground.

During his return to Woolsthorpe, which, being isolated, escaped the Plague, Newton made his greatest discoveries. By the time Newton finally returned to Cambridge in April, 1667, he had discovered his laws of motion as well as the law of gravitation. On top of that, he had made many important discoveries in optics, including the reflecting telescope (hence the term 'Newtonian'), as well as having written the proverbial textbook of calculus.

The irony in all of this: Newton would probably have never discovered these things (and become the scientific legend he is today) had he been too busy with his formal studies.

~Denny Bodzash