Lorain County, Ohio **April 2020**

Newsletter of The Black River Astronomical Society

Guidescope

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

Please check the website blog for any pandemic- or weather-related cancellations or rescheduling of meetings or observing sessions.

April regular meeting online via Zoom only: 4/1/20 7 p.m. Asteroid Mining, by Ed Burcl

April public observing CANCELLED until further notice. Check website blog for updates.

April board meeting CANCELLED—online via Zoom only

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.

PRESIDENT'S MESSAGE

Normally, my message is a summary of the last Board of Directors meeting, as the Directors are the people the club has elected to do the daily operations of the organization for the good of the members. In this case, we cancelled the March Board meeting, so there is nothing to report on that front.

There are, however, other things to discuss during this time of crisis and in light of our new normal. Today is Monday March 23, and as of midnight tonight, Governor DeWine has issued a stay at home order that will affect most of us. In light of this, and other recent news, here is the state of the club.

The *Guidescope* will continue as usual. Dave Lengyel has an all-club mailing list and will continue to send out the monthly Observers Calendar that we all enjoy. I will also post relevant information on the website BlackRiverAstro.org. I will post on the Forum, but if you are not signed up for the Forum, I will also post on the Blog which is available to anyone who goes on the website. If you are on Facebook, I will also post there.

Secondly, we have been working on using the Zoom program which is designed to facilitate online meetings. We are going to have our April General Meeting on Zoom. Zoom is available for Apple Mac desktop computers, Microsoft type PCs, Linux, Android devices and Apple devices. For iPhones or iPads, go to the App store. For Android devices, go to the Google Play store. Otherwise go to Zoom.com. It is free to download and free to use. It operates much like Skype or FaceTime, but is designed for business meetings. The free version is limited to a certain number of users and only 40 minute meetings...HOWEVER, Dave Lengyel has access to the Oberlin College paid-version of Zoom which allows unlimited number of participants and meetings of over two hours, so Dave has kindly agreed to host the meeting for us. Here is how it works: Before our April 1st General Meeting, Dave will mail everyone an invitation to join our Zoom meeting. This invite will include a meeting number. Before the meeting, download Zoom to your desktop, laptop or tablet. You can use your phone, but when we display PowerPoint type slides, the text may be too small to read well on a small cell phone screen. An iPad size tablet or laptop/desktop works better. At 7:00 p.m., log onto

Zoom, hit “Join A Meeting” and enter the meeting number Dave sent you. Hit “Join” and you will be there. We will run a fairly normal meeting where I will work through our usual agenda, calling on Dan Walker to give the Treasurers report, Dave Lengyel to do the Observers Calendar and John Reising to do the Constellation of the Month. We will then go to our monthly program which will display PowerPoint type slides right on your screen while the presenter speaks in the background. Please download Zoom and join us.

Astronomy is something we can all do as a way to get outside while we are at home. Even if your backyard is light polluted, John Reising's beloved double stars can be observed as can some of the brighter Messier objects. It is also a good time to brush up on the spring constellations.

Finally, I don't know how long we will be required to cancel our meetings and observing sessions. It obviously depends on the spread of the Coronavirus, which has not come close to reaching its peak yet. The MetroParks has closed all of their buildings for the foreseeable future, so we have no access to the Visitors Center, and they have also cancelled all public programs like nature hikes, swim lessons at Splash Zone, etc. Thus, we are also cancelled until things change. I strongly suspect it will be June or later before all this is over...I hope I'm wrong on that. We will continue to communicate, to offer tips for observing from home, and access to our monthly meetings and online observers guide type programs. I have no way of knowing the status of the CVAS OTAA convention in June. We will keep you posted.

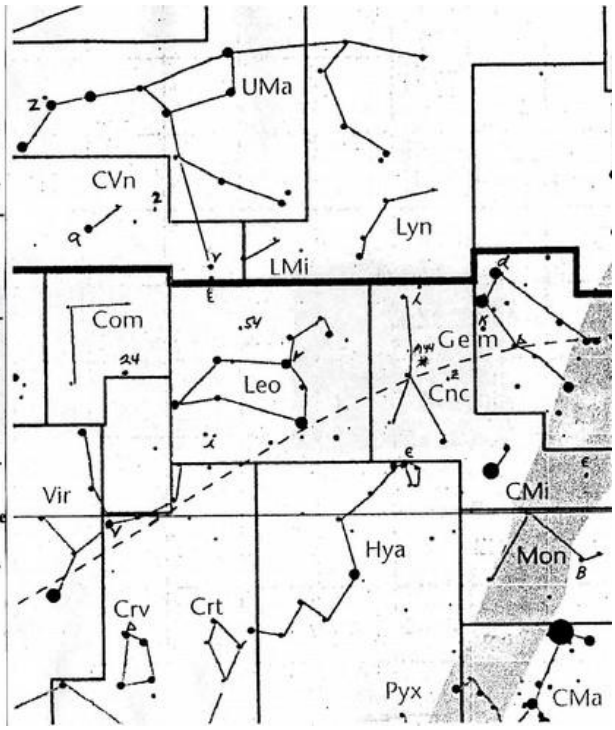
Finally, please, please, heed the instructions of the Governor and the various Health Department and FEMA officials who are issuing orders and guidelines for us. Please stay home except for essential shopping and an occasional walk in the park while practicing social distancing. Most of us are at a more vulnerable age for this disease, and we need to take care of each other and ourselves! Please feel free to email me with suggestions, gripes or info you think I should see at BRASPres@gmail.com.

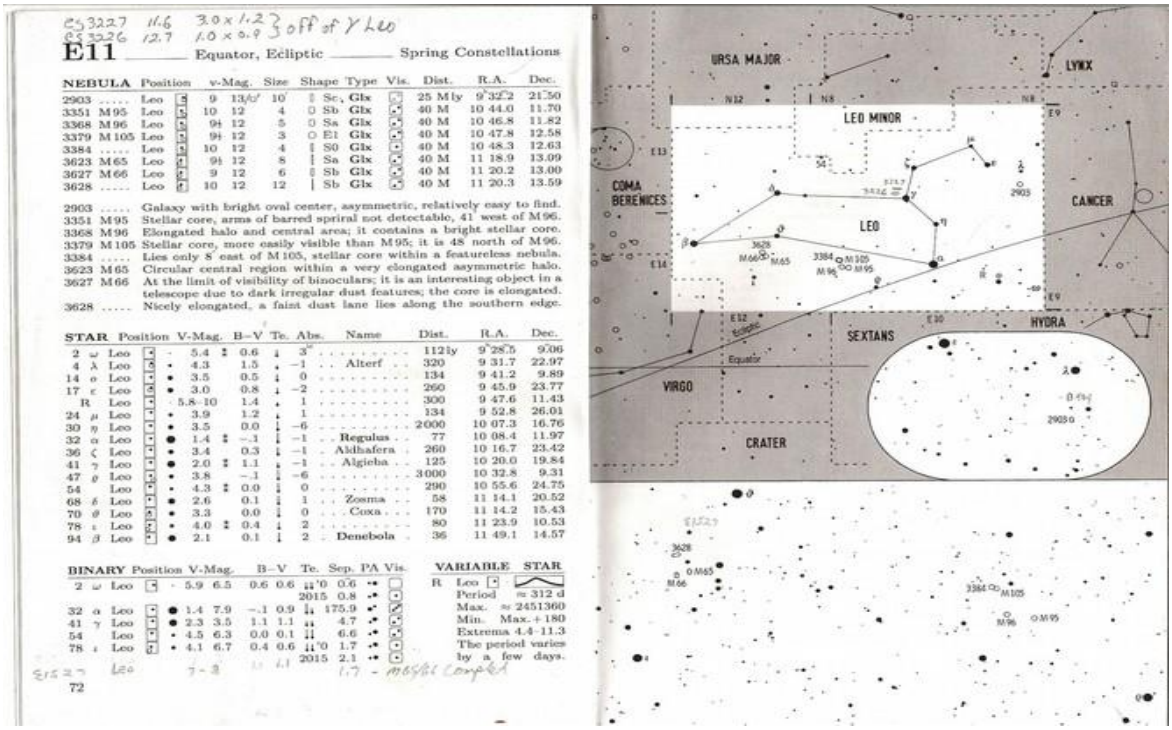
Stay well! We will get through this, together!

~Steve Schauer

SPRING BINARY STARS

ID	MAGs	SEP (")	COLORS (Spectrum)
α Gem (Castor)	1.9, 2.9	4.3	A, A white
δ Gem	3.5, 8.0	6.3	F, A
κ Gem	3.6, 9.4	7.1	G, A yellow
ε Mon	4.4, 6.6	12.3	A, F
β Mon	5.1, 5.4	3.0	B, B blue
	4.6	8.3	B
ε Hydra	3.4, 6.9	2.9	G, F yellow
ζ Cancer	5.6, 6.0	1.0	F, G
	6.1	6.2	G
ι Cancer	4.0, 6.5	30.5	G, A yellow
α Leo (Regulus)	1.5, 8.0	176.0	B, A blue
γ Leo	2.3, 3.5	4.4	K, G yellow
54 Leo	4.5, 6.3	6.6	A, A white
ι Leo	4.1, 6.7	1.7	F, G
ξ UMa	4.3, 4.8	1.7	G, G yellow
α CVn CorCaroli	2.9, 5.5	19.3	A, F
2 CVn	5.9, 9.0	11.5	M, F red
ζ UMa Mizar	2.3, 3.9	14.4	A, A
24 Coma	5.0, 6.6	20.3	K, A orange
γ Virgo	3.5, 3.5	0.8	F, F**
δ Corvus	3.0, 7.5	24.2	A, K





Thanks to John Reising for Constellation of the Month.

Deep-Sky Objects for April

Objects for Binoculars							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
$09^h41.2^m$	+09°54'	14-Omicron	3.5, 9.5	85.4"	44°	Leo	Double Star
$10^h08.4^m$	+11°58'	32-Alpha	1.4, 7.7	176.9"	307°	Leo	Double Star
$10^h16.7^m$	+23°25'	36-Zeta	3.5, 5.8	325.9"	340°	Leo	Double Star
$11^h25.6^m$	+16°27'	81 Leo	5.6, 9.2	55.7"	351°	Leo	Double Star
12^h25^m	+26°0'	Mell 111	1.8v	4.6°		Leo	Open Cluster
Objects for Small Telescopes (2-6 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
$10^h55.6^m$	+24°5.8'	54 Leo	4.5, 6.3	6.5"	110°	Leo	Double Star
$11^h5.8^m$	+00°02'	NGC 3521	m9.0v	12.5'x6.5'		Leo	Galaxy
$11^h18.9^m$	+13°05'	M65	m9.3v	8.7'x2.2'		Leo	Galaxy
$11^h31.7^m$	+14°22'	88 Leo	6.4, 8.4	15.4"	328°	Leo	Double Star
$11^h20.2^m$	+12°59'	M66	m8.9v	8.2'x3.9'		Leo	Galaxy
Objects for Medium-Size Telescopes (8-14 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
$10^h20.0^m$	+19°51'	41-Gamma	2.2, 3.5	4.4	125°	Leo	Double Star
$10^h20.3^m$	+13°36'	NGC 3628	m9.5v	14.0'x4.0'		Leo	Galaxy
$10^h44.0^m$	+11°42'	M95	m9.7v	7.8'x4.6'		Leo	Galaxy
$10^h46.8^m$	+11°49'	M96	m9.2v	6.9'x4.6'		Leo	Galaxy
$10^h47.7^m$	+13°59'	NGC 3377	m10.4v	4.1'x2.6'		Leo	Galaxy
$10^h47.8^m$	+13°25'	M105	m9.3v	3.9'x3.9'		Leo	Galaxy (with NGC3384 & 3389)
Objects for Larger Telescopes (16-inch & larger) Challenge Objects							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
$09^h48.6^m$	33°25'	NGC 3003	m11.9v	5.2'x1.6'		Lmi	Galaxy
$10^h13.8^m$	+38°46'	NGC 3158	m11.9v	2.3'x2.2'		Lmi	Galaxy (In Group)
$10^h29.3^m$	+29°30'	NGC 3254	m11.7v	4.9'x1.4'		Lmi	Galaxy
$10^h49.8^m$	+32°59'	NGC 3395	m12.1v	1.6'x0.9'		Lmi	Galaxy, 3396 attached
$10^h50.9^m$	+13°25'	NGC 3412	m10.5v	3.3'x2.0'		Leo	Galaxy
$11^h16.9^m$	+18°03'	NGC 3607	m9.9v	4.6'x4.1		Leo	Galaxy,(with 3605, 3608)
$11^h34.7^m$	+16°48'	90 Leo	6.0, 7.3, 87	AB 3.3 AC 63.1	209° 234°	Leo	Double Star

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

Thanks to Len Jezior for deep sky objects chart.

Last night 3/21/20 was so clear and no wind I was able to capture these 2 images. The Whirlpool Galaxy 20 minute exposure and Cigar Galaxy 5 minute exposure. These were taken from my rooftop in Bratenahl and I was quite surprised at how clear they are. We are very light polluted here. I wish I had stayed out longer but it was just too cold. ~Laura Goyanes

Saturn, Mars, Jupiter on 3/22/20. (l-r) ~Dave Lengyel

Here is comet ATLAS 3/25/20 at 10:10 p.m. from my house.
41s, 3200 ISO, 135mm using the Pentax Astrotracer.
Reising's Triangle is at upper right. ~Dave Lengyel