Newsletter of
The Black River Astronomical Society
Guidescope

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

--Wednesday, February 5, 7 p.m.: Video "The Rainbow Connection: Sundogs, Rainbows, Solar Halos and Sun Pillars", Carlisle Visitors Center (NOTE: Please check the blog on the club website to make sure the meeting is not canceled due to any extreme winter weather.)

--Thursday, February 13, 7 p.m.: Board meeting, Blue Sky Restaurant, Amherst, OH

--Friday, February 21, 7-9 p.m.: Public Observing, Nielsen Observatory (cloud backup Saturday, February 22)

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.

If you have any astronomy-related wanted/for sale announcements, photos you've taken, article links, equipment reviews, observing reports, essays, or anything that you think would be of interest to the local amateur astronomy community, please send them to your humble Guidescope editor for inclusion in forthcoming issues.

Weather-related Cancellations

Before planning to drive to a regular meeting or to a club observing session in this fun stretch of northern Ohio winter and post-winter, please check the club website blog before you leave to make sure that the meeting or session has not been canceled due to hazardous driving conditions.

Observing sessions may be canceled due to either hazardous driving conditions or to poor sky conditions, so please--save yourself an unnecessary trip or unnecessary risk to life and limb, and check that blog first. Cancellations are posted several hours prior to the scheduled event.

BOARD SUMMARY 1/16/2020

The January Board of Directors meeting was called to order with ten Directors present. The minutes of the December meeting were read and approved as was the Treasurer's report. Standing Committees reported next with Bill Ruth, the *Guidescope* editor, reporting that all was well. He is getting some submissions and now only mails out one snail mail copy with everyone else getting it via email. The Website committee reported that the site seemed to be running well. Schauer will contact Lee Lumpkin who is in Texas dealing with family issues for an extended period, about getting a co-webmaster as Ed Burcl has volunteered his services. Instrumentation chairman John Reising reported that the new 16" Newtonian has been balanced better, a better finder has been added and the hole in the tube through which the focuser operates has been enlarged. The dec tension has also been increased. The Wheely Bars modified by Greg Cox work very well. We do need to do an eyepiece inventory, probably once the winter weather breaks. The OTAA Chairman reported that the following OTAA conventions are planned for 2020:

CVAS	June 13	Observatory Park
MVAS	Aug. 15	
BRAS	Sept. 12	
CAA	Sept. 19	

Finally, the Metro Parks Liaison reported that he has emailed Rick Ternes at the Parks about a couple of repair issues at the observatory including the ground wire for the observatory coming detached from the ground rod, and some settling of the ground near the new building where the electric cables travel to the building.

Programming for our General Meetings is as follows:

February	video	The Rainbow Connection: sundogs, rainbows, solar halos, and sun pillars
March	Dave Lengyel	Measuring Distances in Space

April	Ed Burcl	Asteroid Mining
May	John Reising	Life of William Herschel
June	OPEN	
July	Mickey Hasbrook	Trip to Pahrump
August	John Reising	Mars Opposition
Sept.	OPEN	
October	Elections/Annual Meeting of the Members/video	
November	(tentative) Oberlin College Planetarium	
December	Annual holiday pot luck dinner--Amherst Beaver Creek Reservation.	

Old Business came next with the first item being open program opportunities at our General Meetings. February, June, September and November were open. We decided to show a video in February, and to have a return visit to the Oberlin College Planetarium (subject to checking with Oberlin) in November. This leaves June and September as currently having no program. The Board will revisit this issue next month. Any members interested in presenting a program should contact any Board member or the President (Schauer) at BRASPres@gmail.com

The second item was a report that the Lorain County Metro Parks changed the date of the Sunset Beach Festival at Lakeview Park to August 29th from 4:00-8:30 p.m. We will participate doing solar observing and handing out materials on the club and astronomy. We next added a day of Public Observing to our 2020 schedule. When we made the schedule in the fall, we were unsure of the CAA OTAA dates. In case they chose Saturday Sept 26th, we chose to observe on Friday the 25th with no back-up date. Since CAA is on the 19th, we added the 26th as a back up date for observing. Finally, there was a brief discussion about implementing a “How to use a Telescope” program to coincide with one of our Public Observing sessions. This is something MVAS has done for years with great success. The plan is to have people with telescopes at home that they don't know how to use (or use well) bring their scopes to an observing session. We would start before dark, so we could demonstrate how to set up the scope and the basic operations while they can see, then we would help them observe when it gets dark. To do this, we would need people familiar with operating telescopes to volunteer their time. We would especially need people who are familiar with computer operated scopes to help. We would assign a BRAS member to each person who brings a scope to help for the evening. It was suggested that we would need to get an article in the LCMP Arrowhead, if possible, and have the public pre-register so we would have some idea of numbers. More discussion on this will follow.

New Business followed with only two items to discuss. The first was the always happy task of voting in a new member. We are delighted to welcome Adam Gudings to our ranks. Adam lives in Lorain and is returning to astronomy after an absence of some years.

The second item was a report by Treasurer Dan Walker, that he has paid our liability insurance policy for 2020. We carry a one million dollar liability policy to protect ourselves in case someone is injured at one of our events. This policy has a yearly premium of $300.

Dates were set, and the meeting ajourned at 8:15 p.m.

~Steve Schauer

Imaging with Stellina

Here is the link for my telescope Stellina. I first heard about it from an article in *The Wall Street Journal*. I have only been able to use it when we had the public observing this month. Hoping for clear skies soon. Here are a couple of photos taken with the Stellina.
~Laura Goyanes

M31

M37

Kanopy

If you have a library card you can access an app called *Kanopy* that provides free streaming movies. You get 10 a month. The best part of this is that it also provides for free the Great Courses lecture series and that does not count against your 10 borrows for the month. The Great Courses has quite a few lectures on astronomy and it is a great intro for those of us who are new to the stars.

I was listening today to the lecture on the Hubble as I took my walk this morning.

~Laura Goyanes

E7 _____ Equator, Ecliptic _____ Winter Constellations

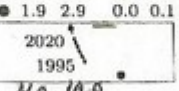
NEBULA	Position	v-Mag.	Size	Shape	Type	Vis.	Dist.	R.A.	Dec.
2129	Gem	7	10/□′	5′	O p	OC	6000 ly	6h01.0	23°30
2168 M35	Gem	5	12	30	O r	OC	3000	6 08.9	24.33
2175	Ori	7	13	20	O p n	OC	7000	6 09.8	20.32
2261	Mon	9¼	10	1.8	◯ Re	DN	3000	6 39.2	8.73
2264	Mon	4	9	15	O p n	OC	1000	6 41.1	9.88
2392	Gem	9	8	0.8	O D	PN	2500	7 29.2	20.91

2129 ..... Recognizable as a cluster in a telescope, very sparse, inconspicuous.
2168 M35 Near the limit of the unaided eye, bright glow with some stars in binoculars, nicely resolved in a telescope, impressive at low power.
2175 ..... Very inconspicuous; 10′ north is the dim diffuse nebula NGC 2174.
2261 ..... **Hubble's Variable Nebula**, variable within days, some detail visible in a telescope at high power; it almost looks like a comet.
2264 ..... **Christmas Tree**, elongated, one mag. 4.7 star, others mag. 8–10.
2392 ..... **Eskimo Nebula**, bright green disk, irregularly bright central region; the mag. 10.5 central star is clearly visible at high power.

STAR	Position	V-Mag.	B–V	Te.	Abs.	Name	Dist.	R.A.	Dec.
7 η	Gem	3.2–3.4	1.6	K	−2	Tejat Prior	350 ly	6h14.9	22°51
13 μ	Gem	2.9	1.6	K	−1	Tejat Posterior	230	6 23.0	22.51
18 ν	Gem	4.1	−.1	B	−2		450	6 29.0	20.21
24 γ	Gem	1.9	0.0	B	−1	Alhena	105	6 37.7	16.40
15	Mon	4.6 ‡	−.2	B	−3	in NGC 2264	1000	6 41.0	9.90
27 ε	Gem	3.1	1.4	K	−4	Mebsuta	900	6 43.9	25.13
31 ξ	Gem	3.4	0.4	A	2		57	6 45.3	12.90
34 θ	Gem	3.6	0.1	A	0		195	6 52.8	33.96
38	Gem	4.7 ‡	0.3	A	2		90	6 54.6	13.18
43 ζ	Gem	3.6–4.2 ‡	0.9	K	−4	Mekbuda	1000,90	7 04.1	20.57
54 λ	Gem	3.6	0.1	A	1		94	7 18.1	16.54
55 δ	Gem	3.5	0.4	F	2	Wasat	59	7 20.1	21.98
60 ι	Gem	3.8	1.0	G	1		125	7 25.7	27.80
62 ϱ	Gem	4.2	0.3	F	3		60	7 29.1	31.78
66 α	Gem	1.6 ‡	0.0	A	1	Castor	52	7 34.6	31.89
69 υ	Gem	4.1	1.5	K	0		240	7 35.9	26.90
77 κ	Gem	3.6	0.9	G	0		145	7 44.4	24.40
78 β	Gem	1.1	1.0	K	1	Pollux	33.5	7 45.3	28.03

K Gem 3–6½ 1.5″ 266

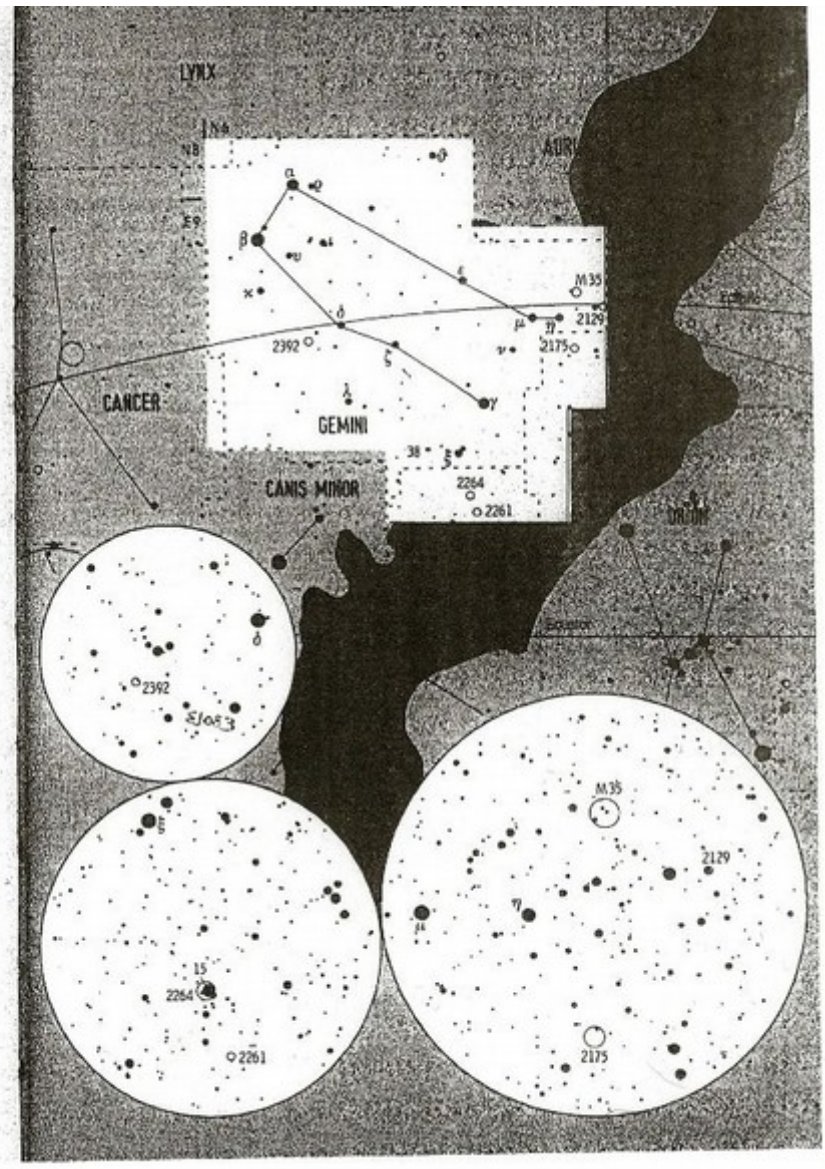
BINARY	Position	V-Mag.		B–V		Te.	Sep.	PA	Vis.
15	Mon	4.7	7.7	−.2	0.0	A	2.9		
38	Gem	4.7	7.7	0.3	0.7	A	7.3		
43 ζ	Gem	4	7.6	0.9	0.6	K	101		
66 α	Gem	1.9	2.9	0.0	0.1	A	'0 3.9		



	2005	4.3	
	2010	4.7	
	2015	5.0	

K Gem 4.0, 10.8 7.0″
64 Gem 3.0, 10.0 9.6″
Δ Gem 3.5, 8.0 6.3″
Σ1083 6.5, 7.5 6.4″

VARIABLE STAR	
7 η Gem	semireg.
Period	232.9 d
Min.	≈ 2451230
Extrema	3.2–3.9
43 ζ Gem	
Period	10.1508 d
Max.	2451205.8



Thanks to John Reising for the Constellation of the Month.

Deep-Sky Objects for February

RA	Dec	Number	Alt.	Size	Mag	Const.	Type of Object
Objects for Binoculars							
05h35.1	-04°44'	NGC 1973-5-7		20' x 10'		Orion	E/R Nebula, just N. of M42
05h35.2	-04°26'	NGC 1981	Cr73	25.0'	m4.6v	Orion	Open Cluster, 1 degree N of M42
05h35.4	-05°27'	NGC 1976	M42	65' x 60'	m2.9v	Orion	"Great Orion Nebula"
05h35.6	-05°16'	NGC 1982	M43	20' x 15'	m6.8v	Orion	Nebula attached NNE edge of M42
05h36	-01°	Collinder 70		150'	m0.4v	Orion	Open Cluster (Belt Stars + 100*)
Objects for Small Telescopes (2-6 inch)							
06h07.5	+24°06'	NGC 2158	Cr81	5'	m8.6v	Gemini	Open Cluster, just south of M35
06h08.9	+24°20'	NGC 2168	M35	28'	m5.1v	Gemini	Open Cluster, 200 stars
06h47.0	-20°44'	NGC 2287	M41	38'	m4.5v	Canis Major	Open Cluster, 80 stars
07h18.8	-24°57'	NGC 2362	H177	8'	m4.1v	Canis Major	Open Cluster, 60 stars
07h29.2	+20°55'	NGC 2393	H454	>15'	m9.2v	Gemini	Planetary Nebula "Eskimo Nebula"
Objects for Medium-size Telescopes (8-14-inch)							
06h01.0	+23°18'	NGC 2129	Cr77	7'	m6.7v	Gemini	Open Cluster, 40 stars
06h43.2	+26°58'	NGC 2266	H216	6'	m9.5p	Gemini	Open Cluster, 50 stars
07h16.9	+13°47'	NGC 2355	H66	9'	m9.7p	Gemini	Open Cluster, 40 stars
07h25.6	+29°29'	NGC 2371-2	H3162	55"	m11.3v	Gemini	Planetary Nebula
07h38.5	+21°34'	NGC 2420	H16	10'	m8.3v	Gemini	Open Cluster, 100 stars
Objects for Larger Telescopes (16-inch & larger) Challenge Objects							
06h16.9	+22°47'	IC 443		50' x 40'	&nbksp;	Gemini	Supernova remnant / E. Neb.
06h25.9	+17°47'	J900	PK194+2.1	>8"	m11.7v	Gemini	Planetary Nebula
06h28.4	+33°50'	NGC 2385		0.7' x 0.3'	m14.2v	Gemini	Galaxy, type ? (with next 2 objects)
06h29.1	+33°51'	NGC 2388		0.9' x 0.6'	m13.7v	Gemini	Galaxy, type S?
06h29.1	+33°51'	NGC 2389		1.8' x 1.4'	m12.9v	Gemini	Galaxy, type SAB(rs)c

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

Thanks to Len Jezior for deep-sky objects charts.

Here's the ISS heading (l to r) into Earth's shadow on 1/21/20. Dave Lengyel

Planet George and Why You Can't Name a Star For Your Valentine

This month brings Valentine's Day, the traditional day for people in love to celebrate each other's company with gifts like flowers, candy, and other things that have no place in a family-friendly newsletter! In recent years, though, one new Valentine's Day phenomenon has come about: pay some money and you can get a star named just for your special someone. While it may seem like a cosmically-cool way to say "I love you," it is nothing more than a scam of astronomical proportions.

Why is this? It all started with the Planet George fiasco in 1781.

When it comes to naming heavenly bodies, the International Astronomical Union (IAU) is the only body whose opinion matters. In the past, naming things in space was a kind of Wild West if you will. At one time, any body or feature on a body was named by whoever discovered it. Usually, the names were not controversial and most in the astronomical community went along with them. However, a turning point came in 1781 when British astronomer William Herschel discovered a planet beyond Saturn.

Being a patriotic Englishman, for Herschel, it was only natural to name the new planet after then-king George III. Herschel's proposed name for the planet: Georgium Sidus (the Georgian Star). If Herschel was trying to gain the king's favor in hopes of financial assistance, it worked as George III became Herschel's patron shortly after the discovery. However, for people of other nationalities, especially the French, a rival nation's king wasn't someone they wanted associated with the 7th planet in the solar system.

Not surprisingly, astronomers of other nations didn't adopt Herschel's king-honoring name, opting to call the planet 'Herschel' instead. In time, though, in keeping with tradition, the 7th planet was named Uranus, the Latinized version of the Greek sky god's name, Ouranos. Why Uranus? Simple. Saturn (6th planet) was the father of Jupiter (5th planet). So, in keeping with this father-son trend, it was only natural that the 7th planet should be named for the father of the 6th, which, by default, would be Ouranos (Uranus), who was the father of Saturn.

By 1850, Uranus was finally the universally (or at least Earth-wide) accepted as the name for the 7th planet (8th planet Neptune being discovered two years previously).

So, after the decades-long Planet George controversy, the rules for naming things in space became more clearly defined and the international community decided as a whole that the names for bodies in the cosmos should not reflect national allegiances on Earth. In time, these unwritten rules would evolve into the formal procedures of today where only the IAU, not late-night advertisers, can approve the name for any cosmic body.

In conclusion, next time you hear an ad where, for a fee, you can name a star after your special someone, don't only ignore the ad, but then warn your non-astronomical friends of such scams. As for the “certificate” you'll get in the mail, it isn't worth the paper it's printed on.

~Denny Bodzash

FOR SALE

--Sky-Watcher 6" f8 achromat doublet, **massive** EQ-6 mount (black, motor drive, not GOTO), AC power supply, hand controller, stainless steel tubular tripod, 2 counterweights, Astrozap dew shield, straight through 8x50 finder, Telrad, 2" mirror diagonal, 1.25" mirror diagonal. Cosmetically good, optically not tried, motor drive not tried. Can be seen at Nielsen Observatory as it awaits further inspection, adjustments, troubleshooting and star-testing.
--Orion tabletop EQ mount, motorized single axis drive for tabletop EQ mount including hand controller, 2x and 8x, and Ganymede 80mm short-tube achromat doublet with 6x30 straight-through finderscope, Amici prism 45 deg. diagonal.
--University Optics Konig MK-70 40mm multicoated 2" eyepiece
--25mm generic Plossl 1.25" eyepiece
--20mm generic RK 1.25" eyepiece
--9mm generic Kellner 1.25" eyepiece
--2x Barlow, generic, 1.25"

Asking prices TBD and negotiable—items are from an individual who had to downsize and move to Florida last November, and are being sold on his behalf. All items other than the Sky-Master doublet can be seen at regular meetings at Carlisle. If interested please contact Bill Ruth through the *Guidescope* editor email link.

Sky-Master 6” f8 in Nielsen Observatory storage building.