



Lorain County, Ohio  
Website: [blackriverastro.org](http://blackriverastro.org)

February 2018  
Newsletter submissions: [Editor](#)

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--Wednesday, February 7, 7 p.m.: Regular meeting, Carlisle Visitors Center. Cassini Mission Video, Part 2, Take 2 (NOTE: If winter weather forecast looks hazardous for travel please check the club website blog or Facebook page to make sure the meeting hasn't been canceled).

--Thursday, February 15, 7 p.m.: Board meeting, Blue Sky Restaurant, Amherst

--Friday, February 16, 8-10 p.m.: Public observing, Nielsen Observatory (cloud backup date Saturday, February 17, 8-10 p.m.) Note: Only one observing weekend is scheduled in January and February due to weather.

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## 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.

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## Guidescope Contributions Wanted

If you have any wanted/for sale announcements, astronomical photos you've taken, interesting article links, equipment reviews, observing reports, or anything that you think the local amateur astronomy community could relate to, please send it to your [humble Guidescope editor](#) for inclusion in forthcoming issues. Many thanks.

~Bill Ruth

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## BOARD SUMMARY      JANUARY 11, 2018

The meeting was called to order at 7:09 p.m. with six Directors present. The minutes from the December meeting were read and approved as was the Treasurer's report. It was noted that the Treasurer, Dan Walker, did pay the \$300 liability insurance bill in December. Committee reports followed with *Guidescope* editor Bill Ruth reporting that all was status quo. The webmaster was absent so there was no Website report, but those Directors who have used the site stated that everything seemed to function correctly. Under Instrumentation, John Reising reported that he has not contacted Celestron yet but he will do so. There was no OTAA news and no report from the Metro Parks Liaison.

Programming is firming up and is as follows:

February:	Mickey Hasbrook	Second part of the Cassini video
March:	Dan Stinebring	Update on Gravity Waves research
April:	Rob Owen	Tentative
May:	Open	
June:	John Reising	Mars (Opposition is July 27 at 24 arc seconds diameter)
July:	Mickey Hasbrook	Lowell Observatory
August:	Denny Bodzash	Solar Superstorms, EMP Attacks, and Hardening the Grid
September:	Open	
October:	Steve Schauer	Annual Meeting of the Members and elections with short video
November:	Open	
December	All	Annual Holiday Pot Luck at Amherst Beaver Creek Reservation

The first item of Old Business was a report on the Lorain County Metro Parks Paddle and Pedal Festival. This will be held at Lakeview Park on Lake Road in Lorain on Sunday May 20<sup>th</sup> from 11:00-3:00 p.m. We will be doing solar observing and handing out information on the club and on astronomy. This is an annual event in which we participate.

The second item of Old Business was a discussion about filling our currently open seat on the Board of Directors. Bill Ruth brought up an interesting question: Do we have to fill the opening...does a club with approximately 45-50 members need 11 Directors? This was briefly discussed and the President referred to a hard copy of the By Laws of the club which call for an eleven person Board. This raised the question about changing the By Laws to give more flexibility in the actual number of Directors, perhaps citing a range of between 9 and 12 Directors according to the current needs of the club. No decision was made as Directors wish to discuss and consider the matter further. If a By Law change is to be made, it would have to be voted on by those present at the October Annual Meeting of the Members, which is the General Meeting set aside every year for elections and other club business.

The final item was a reminder that we would distribute copies of the Sky Gazers Almanac to those in attendance at the February meeting.

Next came New Business with the President suggesting some possible ideas that were inspired by reading the MVAS newsletter. One suggestion was pairing a program on binocular astronomy with a Public Observing session where all observing was done with binoculars. Several members have "big Binoculars", i.e. 15X70s or 20X80s and several others have image stabilized binocs. In addition, the club has six or seven pair at the observatory that could be loaned out. This would be an opportunity to demonstrate to both members and the public how much astronomy can be done with the binoculars most people already have at home. We could open one telescope to use for members of the public who came expecting to look through a scope.

Another possible topic for a talk at one of the General Meetings would be on the so-called Super Moons. While most of us are aware that these are nothing extraordinary, they seem to have caught the attention of the press and the public, so a talk discussing them and the moon in general as well as how to observe the moon, might be a welcome topic. The MVAS folks also do two programs we might want to consider. In November they offer: "So you Want to Buy a Telescope" and in January, they do a program called: "So You Bought A Telescope". Other topics for potential programs were "Moons of the solar system" (or "Moons of a specific Planet like Saturn"), or a program on astronomy myths either from the classical world (Greece, Rome, etc) or from the Native American culture. More discussion will follow, but anyone interested in presenting a talk on one of these or any other topic is encouraged to see or email the President or a Board Member.

Dates were set, and the meeting was adjourned at 8:31 p.m.

~Steve Schauer

E 7 Equator, Ecliptic Winter Constellations

NEBULA	Position	v-Mag.	Size	Shape	Type	Vis.	Dist.	R.A.	Dec.
2129	Gem 3	7	10'	o	P	OC	6000ly	6 <sup>h</sup> 10 <sup>m</sup>	23 <sup>o</sup> 30'
2168	M 35	5	12	30	o	r, OC	3000	6 <sup>h</sup> 08 <sup>m</sup>	24 <sup>o</sup> 33'
2175	Ori	7	13	20	o	p n, OC	7000	6 <sup>h</sup> 09 <sup>m</sup>	20 <sup>o</sup> 32'
2261	Mon	9	10	1.8	o	Re, DN	3000	6 <sup>h</sup> 39 <sup>m</sup>	8 <sup>o</sup> 73'
2264	Mon	4	9	15	o	p n, OC	1000	6 <sup>h</sup> 41 <sup>m</sup>	9 <sup>o</sup> 88'
2392	Gem 5	9	8	0.8	o	D, PN	2500	7 <sup>h</sup> 29 <sup>m</sup>	20 <sup>o</sup> 91'

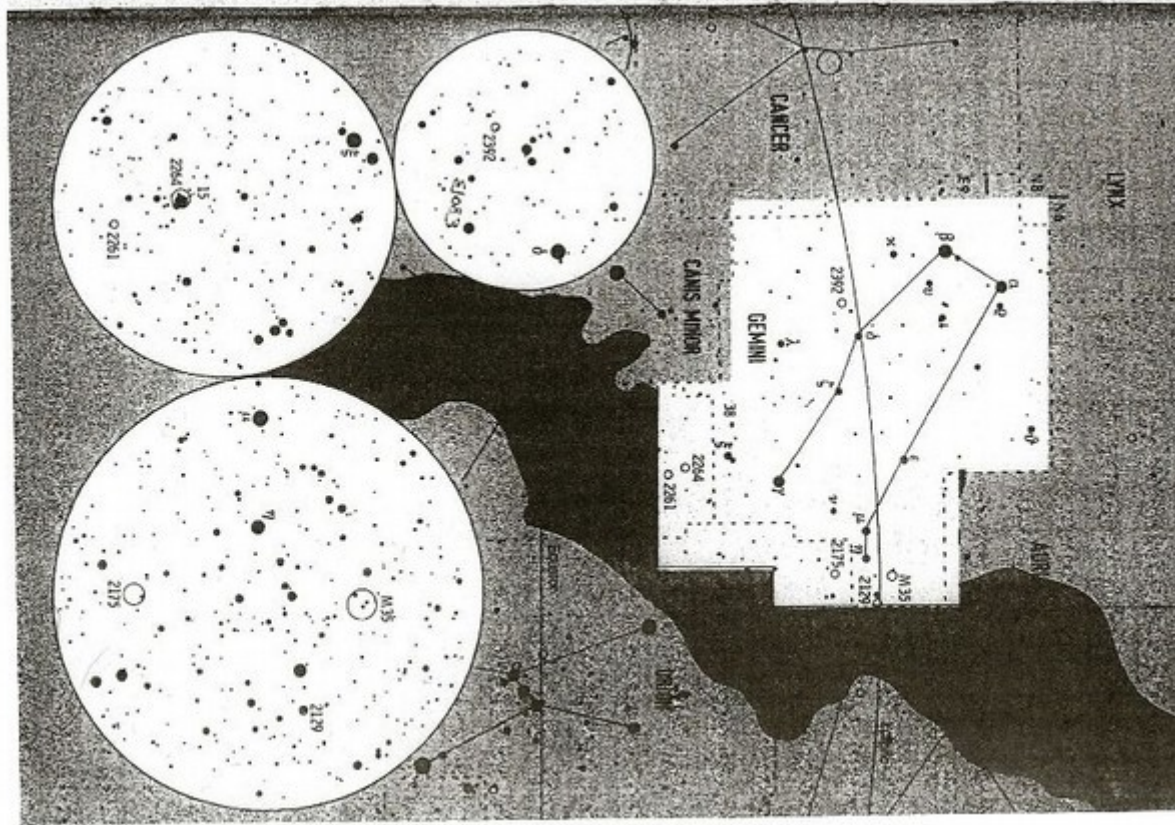
2129 ..... Recognizable as a cluster in a telescope, very sparse, inconspicuous.  
 2168 M 35 Near the limit of the unaided eye, bright glow with some stars in binoculars, nicely resolved in a telescope, impressive at low power.  
 2175 ..... Very inconspicuous; 10' north is the dim diffuse nebula NGC2174.  
 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 $\eta$	Gem 2	3.2-3.4	1.6	-2'	Tetaj Prior	350 ly	6 <sup>h</sup> 14 <sup>m</sup>	22 <sup>o</sup> 51'	
13 $\mu$	Gem 3	2.9	1.6	-1	Tetaj Posterior	450	6 <sup>h</sup> 23 <sup>m</sup>	22 <sup>o</sup> 51'	
18 $\nu$	Gem 3	4.1	-1	-2		230	6 <sup>h</sup> 29 <sup>m</sup>	20 <sup>o</sup> 21'	
24 $\gamma$	Gem 2	1.9	0.0	-1	Alhena	105	6 <sup>h</sup> 37 <sup>m</sup>	16 <sup>o</sup> 40'	
15	Mon	4.6	-2	-3	in NGC2264	1000	6 <sup>h</sup> 41 <sup>m</sup>	9 <sup>o</sup> 90'	
27 $\epsilon$	Gem 2	3.1	1.4	-4	Mabesta	900	6 <sup>h</sup> 43 <sup>m</sup>	25 <sup>o</sup> 13'	
31 $\xi$	Gem 2	3.4	0.4	1		57	6 <sup>h</sup> 45 <sup>m</sup>	12 <sup>o</sup> 90'	
34 $\delta$	Gem 2	3.6	0.1	0		195	6 <sup>h</sup> 52 <sup>m</sup>	33 <sup>o</sup> 96'	
38	Gem 2	4.7	0.3	1		90	6 <sup>h</sup> 54 <sup>m</sup>	13 <sup>o</sup> 18'	
43 $\zeta$	Gem 2	3.6-4.2	0.9	-4	Mekbuda	1000-90	7 <sup>h</sup> 04 <sup>m</sup>	20 <sup>o</sup> 57'	
54 $\lambda$	Gem 2	3.6	0.1	1		94	7 <sup>h</sup> 18 <sup>m</sup>	16 <sup>o</sup> 54'	
55 $\delta$	Gem 2	3.5	0.4	1	Wasat	59	7 <sup>h</sup> 20 <sup>m</sup>	21 <sup>o</sup> 98'	
60 $\epsilon$	Gem 2	3.8	1.0	1		125	7 <sup>h</sup> 25 <sup>m</sup>	27 <sup>o</sup> 80'	
62 $\theta$	Gem 2	4.2	0.3	1		60	7 <sup>h</sup> 29 <sup>m</sup>	31 <sup>o</sup> 78'	
66 $\alpha$	Gem 2	1.6	0.0	1	Castor	52	7 <sup>h</sup> 34 <sup>m</sup>	31 <sup>o</sup> 89'	
69 $\nu$	Gem 2	4.1	1.5	0		240	7 <sup>h</sup> 35 <sup>m</sup>	26 <sup>o</sup> 90'	
77 $\kappa$	Gem 2	3.6	0.9	1		145	7 <sup>h</sup> 44 <sup>m</sup>	24 <sup>o</sup> 40'	
78 $\beta$	Gem 2	1.1	1.0	1	Pollux	33.5	7 <sup>h</sup> 45 <sup>m</sup>	28 <sup>o</sup> 03'	

**B** Gem 3-6  $\zeta$  1.5" 266  
**BINARY** Position V-Mag. B-V Te. Sep. PA Vis.  
 15 Mon 4.7 7.7 -2.2 0.0 11 2.9  
 38 Gem 4.7 7.7 0.3 0.7 11 7.3  
 43  $\zeta$  Gem 4 7.6 0.9 0.6 11 101  
 66  $\alpha$  Gem 1.9 2.9 0.0 0.1 11 10 3.9  
 2020  $\gamma$  2005 4.3  
 2010 4.7  
 1995 2015 5.0

**VARIABLE STAR**  
 7  $\eta$  Gem 2 seming. Period 232.9 d Min.  $\approx$  2451230 Extrema 3.2-3.9  
 43  $\zeta$  Gem 2 10.1508 d Max. 2451205.8

K Gem 4.0, 10.0  
 64A Gem 3.0, 10.0  
 A Gem 3.5, 8.0  
 E 1663 6.5, 7.5  
 70"  
 9.6"  
 6.3"  
 6.4"



Constellation of the month courtesy of John Reising.



## Deep-Sky Objects for February

RA	Dec	Number	Alt.	Size	Mag	Const.	Type of Object
<b>Objects for Binoculars</b>							
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*)
<b>Objects for Small Telescopes (2-6 inch)</b>							
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"
<b>Objects for Medium-size Telescopes (8-14-inch)</b>							
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
<b>Objects for Larger Telescopes (16-inch &amp; larger) Challenge Objects</b>							
06h16.9	+22°47'	IC 443		50' x 40'	&nbsp;	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.

Courtesy of Len Jezior.



Jupiter and Mars appeared only  $0.3^\circ$  apart on this chilly morning Jan. 6, 2018. This was taken right out of my back door at 7:10 a.m. Canon SL1, 1600 ISO, 24mm, f/4, 1/5s, hand held with the stabilizer on. My fingers are still cold from dealing with the tripod yesterday morning. ~Dave Lengyel



Lunar eclipse, January 31, 2018, as seen from Bandelier National Monument, Utah. The star on the right of the frame is Asellus Australis in Cancer. ~Kelly Ricks

## Former Senator Reveals Government Secretly Studied UFOs

In a bombshell interview late in December, retired Nevada senator Harry Reid revealed that the federal government had secretly studied UFOs as recently as 2012 at a cost of about \$22 million. The revelations came about in an interview with well-known Las Vegas investigative reporter George Knapp and quickly spread to the *New York Times* and *Politico* before going viral on the Internet.

According to Reid, the project, known as the Advanced Aerospace Threat Identification Program, was created in 2007 to study unidentified aerial phenomenon (the modern term for UFOs since 'UFO' has become too connected with giggles). The program was run by the Department of Defense (DOD) and has never been acknowledged by any government agency or official to exist, until now.

When asked how he felt about the public knowing about his involvement in getting the project going, Reid said that “I am not embarrassed or ashamed or sorry . . . I think it's one of the good things I did in my congressional service.” Reid also said that he wished the program was still going.

Delving into the details, it appears that a friend of Reid, Robert Bigelow, the billionaire head of the aerospace research company Bigelow Aerospace and staunch believer in alien visitation, was instrumental in planting the idea in the senator's mind. In fact, much of the \$22 million allotted by the DOD to the UFO research went to Bigelow's company, which used it to study reported sightings, videos of UFOs, and people who had reported physical side effects after UFO encounters. Rumors also run rampant that Bigelow Aerospace is in possession of materials from crashed UFOs.

The program was officially ended in 2012 because, according to the DOD, it had higher priorities. Unofficially, it was the fear that the public would find out about the program that forced its cancellation. However, there are rumors of its continued existence, albeit at much higher levels of classification. Supposedly, the study produced a 490 page report, which concluded, among other things, that the United States was completely incapable of protecting its airspace against the unknown craft at the present time. This report has yet to see the light of day.

The bombshell revelation here is that all government interest in UFOs was supposed to have ended in 1969. From 1947-1969, the federal government and Air Force ran a series of three successive investigations into UFOs, largely to determine whether they were a threat to national security. The last of the studies, Project Blue Book, was canceled in 1969 after the Air Force concluded that UFOs posed no threat to national security. Since then, all official government involvement in the investigation of UFOs ceased.

The recent revelations prove exactly the opposite. It will be interesting to see if further disclosures come about in the future as the proverbial cat has been let out of the bag.

Link:

[https://www.nytimes.com/2017/12/16/us/politics/pentagon-program-ufo-harry-reid.html?\\_r=2](https://www.nytimes.com/2017/12/16/us/politics/pentagon-program-ufo-harry-reid.html?_r=2)

~Denny Bodzash