

Newsletter of
The Black River Astronomical Society

Guidescope

Lorain County, Ohio
Website: blackriverastro.org

January 2017
Newsletter submissions: [Editor](#)

--Wednesday, January 4, 7 p.m.: Regular meeting, Carlisle Visitors Center
Program: Video of solar eclipses, presented by Greg Zmina

--Thursday, January 12, 7 p.m.: Board meeting, Blue Sky Restaurant,
Amherst

Friday, January 27, 7-9 p.m.: Public observing, Nielsen Observatory (cloud
backup date Saturday, January 28)

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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.

BOARD SUMMARY 12/15/16

The December Board of Directors meeting was called to order at 7:05 p.m. with 10 Directors present. The minutes of the November meeting were read and approved as was the Treasurer's report. Committee reports came next with Bill Ruth, the *Guidescope* editor, reporting that all was well and that he had some submissions. Members are reminded that articles, photos etc. on any astronomical topic are welcomed for inclusion in the newsletter. Lee Lumpkin reported that a link to the Oberlin Observatory calendar was now restored on our links page and that our website was running well.

Under Instrumentation, John Reising reported that the 16" Newtonian is safely stored at his home and that he is starting to fabricate straps needed to secure the scope to its equatorial cradle. The OTAA committee head reported that we were able to move our OTAA convention to Sept. 23rd and that the Birmingham Church has our reservation. They are sending a contract to Treasurer Dan Walker to make the renting of the church hall official. The Metro Parks Liaison had no report.

Programming is set as follows:

January	Greg Zmina	Video on solar eclipses
February	Dave Lengyel	Meteor Crater and a display of the club's meteor collection
March	John Reising	Messier Marathon
April	TBD	Total Solar Eclipse
May	Tim Kreja	TBD
June	Dan Walker	TBD

Next came Old Business and the first item of discussion was our meeting schedule for 2017. Lee Lumpkin reported that he has entered our General Meeting and Public Observing schedules on the website calendar. Schauer reported that our January and February meetings will be at Carlisle as usual. However, due to the anniversary celebration and displays the Metro Parks will have at Carlisle, the March, April and May meetings will be held at the Sandy Ridge Reservation on Otten Rd. in North Ridgeville. Schauer will change the location on the calendar for those three months.

Next, Dan Walker reported on the plans he and Steve Schauer have made for viewing the total solar eclipse on August 21st of 2017. They will stay in a hotel in Elizabethtown, Kentucky on the night of the 20th. Elizabethtown is about 90 miles north of the line of totality. They will get up early and check the weather. Dan has detailed maps of the line of totality and, depending on the forecast, they have several places in mind to observe. The area also has other attractions including Mammoth Cave and the National Corvette Museum in Bowling Green, Kentucky.

The bulk of the meeting time was taken up in a discussion of where a building to house the new 16” telescope might be located at the Nielsen site. The building being considered is 8 feet wide by 12 feet long and will be 8 feet high. It needs to be placed on a new concrete pad and next to one of the existing pads. Because of the height, we need to place the building so it does not block views from inside the current building nor should it be in the way of viewing from the current viewing pads. No decisions on the size of the building or its location have been made. One thing that was decided was that John Reising will cobble together a quick Dobsonian mount for the scope and install the mirror, diagonal and focuser. Once that is done, he can determine the optical quality of the telescope prior to making any decisions on spending club funds on a building. Once we decide where we would like to place the building, and its exact size, we will approach the Metro Parks about permission. The hope is to roll the telescope out of the building onto one of the existing pads. The building would be built on site by a company in Lorain and then donated to the Metro Parks. We also hope they will pay for the concrete pad upon which to place the building. More discussion on this will be forthcoming over the winter. The original plan was to have the scope ready to use in early summer, but no definite schedule has been made at this time.

Next came New Business, with only two topics of discussion. Firstly, we have heard from Nicole Haas, the head of the Avon Lake Recreation Department. She is planning the second annual “Dark Skies, Bright Kids” program, and has invited us to participate as we did last year. We have agreed to do so on Friday, February 17th. We will have telescopes set up outside if it is clear, and will do displays and short programs inside. Nicole also runs summer day camps, and would like to bring a busload of kids ages 6-12 to the Nielsen Observatory on the summer solstice which is Wednesday, June 21st. The kids would get a tour of the observatory, a brief talk on what the solstice is, and if clear, we could do a little solar observing. We will propose Friday, June 23rd as a back-up date in case of rain.

Dates for January are as follows:

General Meeting	Wed. Jan. 4	7:00 p.m.	Carlisle Visitors Center
Board Meeting	Thur. Jan. 12	7:00 p.m.	Blue Sky Restaurant, Amherst
Public Observing	Fri/Sat. Jan. 27/28	7-9 p.m.	Nielsen Observatory

The meeting was adjourned at 8:48 p.m.

~Steve Schauer



This may be the brightest sundog that I've ever seen. I saw it the morning of December 15, 2016, around 8:30 on Austin Rd. in Camden Township, not far from my house. This photo was taken with my iPhone camera. ~Dave Lengyel

Review: Carl Sagan's *The Demon Haunted World*

This past December marked 20 years since the death of Carl Sagan, the astronomer who became a household name and unofficial spokesman for science thanks to his *Cosmos* TV miniseries. While Sagan is best known for *Cosmos*, he also was a prolific writer of science books targeted toward the general public, the last of which was titled *The Demon Haunted World: Science as a Candle in the Dark*, published in 1995.

Throughout his life as a scientist and later celebrity scientist, Sagan was a strong proponent of the scientific method and critical thought while railing against pseudoscience and superstition and ignorance they bring forth. However, going into the mid 1990s, Sagan had never written a book on such topics, though he commonly sprinkled these themes throughout his other works. This changed

with *The Demon Haunted World* which, as it would come to pass, became, in a way, Sagan's final testament to the world.

The book, which is over 400 pages and broken into 25 chapters, can really be broken into thirds, each of which takes a different approach toward dismantling pseudoscience and promoting the scientific method. The first third of the book is largely devoted to systematically investigating pseudosciences. The middle third teaches how one can think scientifically in order to pick apart dubious claims. The final third of the book focuses on the need of society as a whole to think scientifically in order to guard against tyranny and national ignorance.

Of the many pseudoscientific topics addressed, aliens and alien abduction are the most frequently addressed. This is probably thanks to the wide proliferation in media about aliens we were experiencing in the mid 1990s and the fact that, more so than any other pseudoscience, aliens are seen as being under the umbrella of science by those not familiar with science.

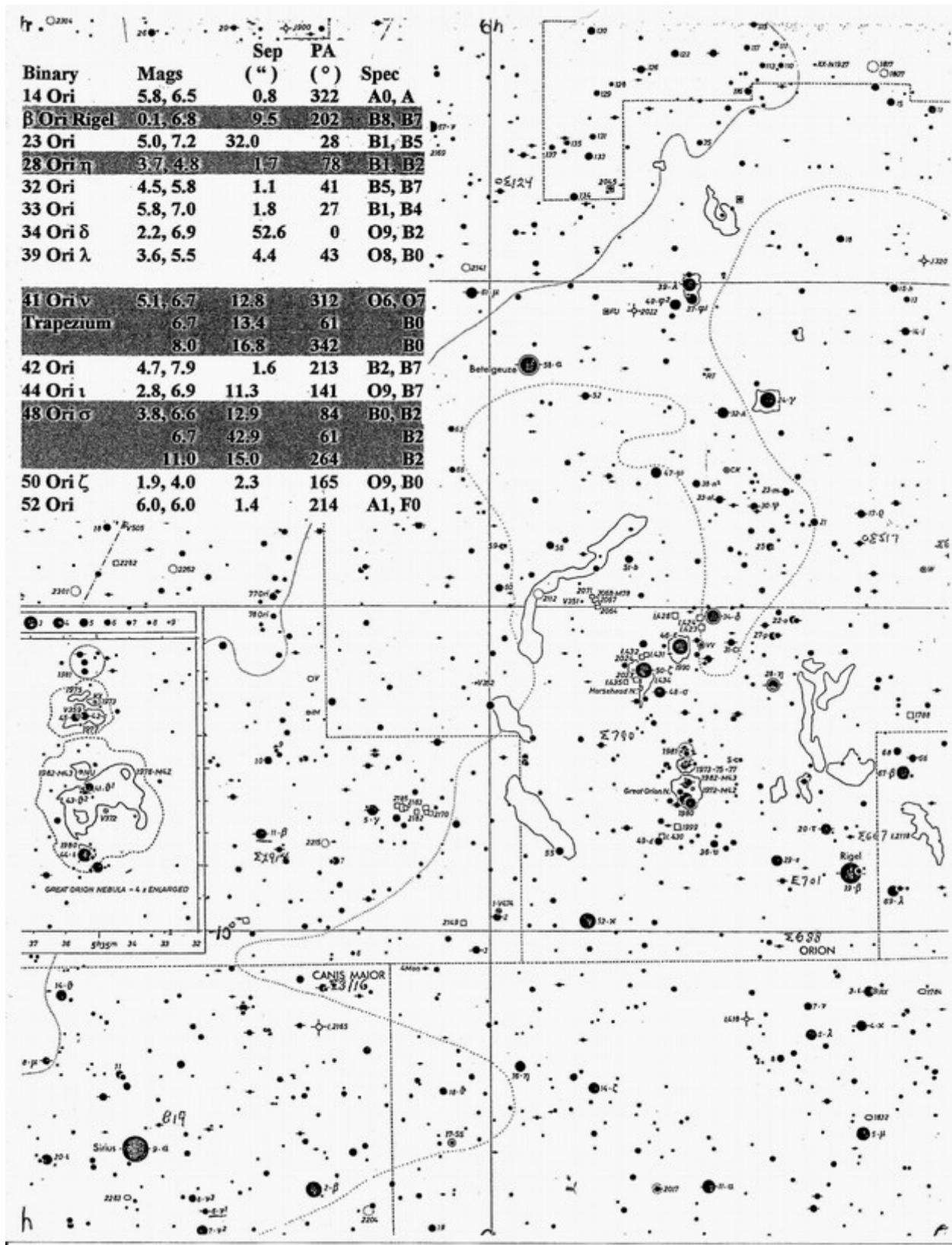
My favorite chapter in the book was “The Dragon in My Garage”, wherein Sagan presents a wild claim (that he has a dragon living in his garage) and invites the reader to take the position of skeptical investigator. The story goes like this. The reader looks in the garage and sees no dragon. The reason: it's invisible. The reader spreads flour on the floor to see the dragon's footprints, none of which appear. Why? The dragon floats in the air. When the reader uses a thermal gun to look for temperature variations caused by the dragon's breath and nothing happens, this is because the fire is heatless. At a loss, the reader then sprays paint in the garage to render the dragon visible. When nothing happens, the reader/investigator is informed that this is because the dragon is not physical. The question is thus posed: what's the difference between an invisible, floating, non physical dragon that breathes heatless fire and no dragon at all? At best, the most any investigator could do is postpone judgment until some kind of physical, measurable evidence for a dragon comes to light. In the same way, Sagan says, pseudosciences ask us to do the same thing: believe something veiled as science on faith alone.

Perhaps more so than any other of his books, Sagan's *The Demon Haunted World* will stand the test of time. As iconic as *Cosmos* is and as heavy on science his other books are, science, as Sagan so often acknowledged, is a self-correcting process wherein current knowledge will be updated and old theories discarded in the face of new evidence. It is for this reason that, as the decades pass, Sagan's other works will become dated in the face of new discoveries while *The Demon Haunted World: Science as a Candle in the Dark*, will remain forever current as this book does not state scientific facts, but teaches how to think scientifically. Needless to say, this is an absolute must-read for anyone interested in not only science, but in psychology, sociology, history, and politics, among other topics.

This is just a nuts and bolts version; for the full review, go here:

<http://bodzashphotoastro.blogspot.com/2016/12/carl-sagans-demon-haunted-world.html>

~Denny Bodzash



Binaries in Orion

~via John Reising

Deep-Sky Objects for January

Objects for Binoculars							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
06 ^h 32.4 ^m	+04° 52'	NGC 2244	4.8v	23'		Mon	Open Cl in Rosette Nebula
06 ^h 41.1 ^m	+09° 53'	NGC 2264	3.9v	20'		Mon	OC 40• "Christmas Tree Cluster"
07 ^h 03.2 ^m	-08° 20'	M50	5.9v	16'		Mon	Open Cluster 80•
07 ^h 36.6 ^m	-14° 30'	M47	4.4v	29'		Pup	Open Cluster 30•
07 ^h 41.8 ^m	-14° 49'	M46	6.1v	27'		Pup	Open Cluster 100•
07 ^h 44.6 ^m	-23° 52'	M93	6.2:v	22'		Pup	Open Cluster 80•
Objects for Small Telescopes (2-6 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
06 ^h 23.8 ^m	+04° 36'	Epsilon (AB)	4.5, 6.5	13.4"	127°	Mon	Double Star
06 ^h 51.8 ^m	+00° 28'	NGC 2301	6.0v	12'		Mon	Open Cluster 80•
07 ^h 37.5 ^m	-12° 04'	Melotte 71	7.1v	9'		Pup	Open Cluster 80•
07 ^h 38.8 ^m	-26° 48'	k Puppis	4.5, 4.7	9.9"	318°	Pup	Double Star
08 ^h 05.3 ^m	-28° 10'	NGC 2527	6.5v	16'		Pup	Open Cluster 40•
08 ^h 10.7 ^m	-12° 50'	NGC 2539	6.5v	21'		Pup	Open Cluster 50•
Objects for Medium Telescopes (8-14 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
07 ^h 08.3 ^m	-10° 39'	NGC 2343	6.7v	6'		Mon	Open Cluster 20•
07 ^h 17.8 ^m	-15° 37'	NGC 2360	7.2v	12'		Cma	Open Cluster 80•
07 ^h 41.8 ^m	-14° 44'	NGC 2438	11.0v	66"		Pup	Plan Neb in M46
07 ^h 41.9 ^m	-18° 13'	NGC 2440	9.4v	14"/32"		Pup	Planetary Nebula
08 ^h 00.2 ^m	-10° 47'	NGC 2506	7.6v	6'		Mon	Open Cluster 70•
08 ^h 00.7 ^m	-19° 04'	NGC 2509	9.3p	8'		Pup	Open Cluster 150•
Objects for Larger Telescopes (16-inch & larger) Challenge Objects							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
06 ^h 32.3 ^m	+05° 03'	NGC 2337-39	-	80'x60'		Mon	"Rosette Neb" (Use O-III filter)
06 ^h 39.2 ^m	+08° 44'	NGC 2261	-	3.5'x1.5'		Mon	"Hubbles Variable Nebula"
06 ^h 49.0 ^m	-36° 00'	NGC 2298	9.4v	6.8'		Pup	Globular Cluster
07 ^h 38.4 ^m	-10° 41'	Melotte 72	10.1p	9'		Mon	Open Cluster 40•
07 ^h 47.4 ^m	-27° 20'	NGC 2452	12.0v	19"		Pup	Planetary Nebula
07 ^h 47.8 ^m	-27° 14'	NGC 2453	8.3v	5'		Pup	Open Cluster 30•

Print and use the [Deep-Sky Interest Group - Observation Form](#) to record your observations.

~via Len Jezior

Going Planetary, I Believe

The sky has always been a source of solace and sanity for me. The rhythms and movements of the Sun, Moon, planets, comets, asteroids in a slowly imperceptibly changing vast, oceanic background of stars, clusters, galaxies and nebulae always puts things in perspective.

The sky, being an aspect of nature, is authentic. If Chico Marx asked me “Who are you going to believe, me, or your own eyes?” I'd tell him I'll believe my own eyes, thank you very much. All I have to do is step outside and see for myself what's what and what's where, and it's right where it's supposed to be when it's supposed to be.

It's occurred to me that the natural mind shares the same quality as the sky; it's spacious, transparent, and effortlessly contains everything. Whenever I look into the sky my vision instantly extends to the farthest reaches of the visible universe.

Hooray for me, hooray for all of us astronomers and scientists, amateur and professional: we see directly what's really going on around us. We are so lucky to see with our own clear natural eyes and understand with our own clear natural mind what's really going on.

...which can makes turning our eyes and mind to current events agonizing. Much of the Internet and other media have become poisoned wells, filled with fake news, extremism, nationalism, and all varieties of intentional and unintentional BS. “Believe us!” “Believe me!”

I turn off the computer, and the TV, and put the newspaper in the recyclable pile, and step outside. It's cold, there's lots of light pollution where I live, and the clouds suddenly disappear, or reappear, without warning or apology, but that's fine. It's just nature, sweet, honest nature. There are no borders in the sky, or on this planet, or anywhere in the universe. Believe me.

~Bill Ruth