

Newsletter of
The Black River Astronomical Society

Guidescope

Lorain County, Ohio
Website: blackriverastro.org

February 2017
Newsletter submissions: [Editor](#)

--Wednesday, February 1, 7 p.m.: Regular meeting, Carlisle Visitors Center
Program: Magic Lantern Slide-Show of Meteor Crater, Arizona; and a Display
of Meteorites, presented by Club Meteorologist Professor David Lengyel

--Thursday, February 9, 7 p.m.: Board meeting, Blue Sky Restaurant,
Amherst

Friday, February 24, 7-9 p.m.: Public observing, Nielsen Observatory (cloud
backup date Saturday, February 25)

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Board Summary--January 12, 2017

The meeting convened at 7:00 p.m. with 10 Board members present. Minutes were read and approved as was the Treasurer's report. The first committee report was the *Guidescope* committee, with Bill Ruth reporting that all was well. The Website was also reported to be status quo. Under Instrumentation, John Reising reported that all was well at the observatory the last time it was used. No one has been there recently due to cloudy weather. Neither the OTAA nor the Metro Parks Liaison had anything new to report.

Programming is set as follows:

February	Dave Lengyel	His trip to Meteor Crater and the club's meteor collection
March	John Reising	Messier Marathon
April	TBD	2017 Eclipse Program
May	Tim Kreja	TBD
June	Dan Walker	TBD
July	Denny Bodzash	Major Historical Discoveries (tentative topic)
Aug.-Nov.	OPEN	

Old Business came next. The first item was a reminder that the February General Meeting is at Carlisle. Then, the March, April and May meetings are at Sandy Ridge (which is also called the Johnson Wetlands Center). The move is due to the Metro Parks anniversary celebrations being held at Carlisle.

The second item of old business was a discussion of the club's participation in the Avon Lake Recreation Department's "Dark Skies, Bright Kids" program. We participated last year and have committed to doing so again. The program starts at 6:00 and runs until 9:00 p.m. on Friday February 17th. If it is clear, we will have a scope or two outside. Inside we will have displays, demonstrations, and club materials. Dan Walker, Jeff Walsh, Micky Hasbrook, Greg Zmina and Steve Schauer have

committed to attend. Any other club members are welcome to attend. The event is held at the Old Firehouse, 100 Avon Belden Rd, Avon Lake. We will arrive at 5:15 p.m. to set up.

The Avon Lake Rec. Dept. also runs day camp bus trips during the summer, and requested a visit to the Nielsen Observatory on or about the Solstice on June 21st (a Wednesday) to tour the building and learn about the Solstice. If the weather cooperates, we will also do some solar observing. We agreed to the visit on the 21st, which will start at 10:30 a.m. and end at 11:30. Outside we will have one group of kids learning about what the Solstice is on one side of the building. Inside a second group will tour the observatory and learn about the telescopes, while a third group will be outside on the other side of the building, doing solar viewing. If the forecast is for rain, we may be able to postpone this visit. Dave Lengyel, Dan Walker, Lee Lumpkin, Jeff Walsh, and Steve Schauer are expected to be there. Other club members are invited to help out.

Next came a second discussion on where to place a new building to house the 16" telescope when it is ready for use. No decision on size of building or its placement has been made as we are waiting to test the 16" mirror first. John Reising has the scope at his house and was planning on building a rough Dobsonian mount in which to test it. However, he has discovered that he should be able to install the mirror in a Dob mount he currently has, and with a little modification, should be able to ascertain the quality of the mirror. We expect the mirror to be fine, but believe it is wise to check. John will do this as he has time and the weather to do so.

The last item of Old Business was a brief discussion of Dave's program on Meteor Crater in February. Schauer will bring his slide projector (we are going retro tech for this program), and Tim Kreja will bring the club's meteor collection for the members to enjoy.

There were only two items of New Business. The first was a discussion of the Keystone Elementary School Science Night to which we have been invited. This program is on Friday March 31st from 6:00-9:00 p.m. at Keystone Elementary, 531 Opportunity Way (off Rt. 301), in Lagrange. Dan Walker with help from several others will do the demonstration of distances in space using adding machine tape. The Science Night will operate 15 to 20 minute sessions with a brief lesson and then a hands-on activity. Dan's lesson using the adding machine tape is perfect for this. Dave Lengyel, Greg Zmina, and Micky Hasbrook also hope to attend with other club members welcome to help.

The last item of New Business was a suggestion by Schauer to move the June Board meeting from the 7th, when it would be the day after the General Meeting, to the following Wednesday, June 15th. This is what is usually done when the two meetings fall on consecutive nights and it was agreed to in this case.

Upcoming dates were set, and the meeting was adjourned at 8:16 p.m., which may have set a record for earliest adjournment time.

~Steve Schauer

Hot Stars, Cold Nights

The month of February signals the depth of winter in northeast Ohio. Despite that, though, this is the perfect time during which to view the winter sky, which features some of the brightest and hottest stars within 1,000 light years of Earth. So, while the nights may be cold, the stars are anything but at this time of year.

When looking at the stars, color is a direct measure of brightness. On Earth, the term “red-hot” is often used to describe something of extreme temperature. With stars, though, red actually signifies the coolest stars. In descending order of temperature, these are the stellar colors to look for: blue, blue-white, white, yellow, orange, and red. Now, taking a walk outside and looking to the sky on a February night, one cannot notice all of the hot blue stars populating the sky at this time of year.

So, why is this?

Because we live in it, it is impossible to tell exactly what our Milky Way Galaxy looks like. However, from both observations of what types of stars are located where in the sky and by looking at other, similar galaxies, scientists can give an educated guess as to what our island universe in the cosmos looks like. The picture: a barred spiral galaxy with old stars at the center and young ones in the outer arms. Now, for reasons not fully understood, the outer arms of the galaxy tend to be populated with hot, young, blue stars while the galactic center teems with older, yellow, and cooler stars, the big blues having long since gone supernova. Why more blue stars haven't formed is anyone's guess but as far as current observation has determined, if one wants to see hot, young, blue stars, one has to look toward the outside of the galaxy, which is just what we happen to be doing this time of year.

Like with the constellations, certain sections of the galaxy are visible at some points of the year and not others because the Sun is in the way. For example, right now, we just happen to be facing toward the outer edges of the galaxy while it is night. During the day, we face the galactic center, the dense old stars, and the ghostly stellar river that is the Milky Way itself, which is why we cannot see it as the Sun's glare blocks out everything in this area of sky. In summer, the situation is flip-flopped.

~Denny Bodzash

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'	 	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 DSO charts)

Surviving SAD, CSDD, and NTS

Winter in northern Ohio can not only produce the visceral dreariness of Seasonal Affective Disorder (SAD) but also Clear Sky Deficit Disorder (CSDD) among the amateur astronomical community. This past January has been especially brutal for stargazers: relentless thick cloud cover, night after night. No stars, and not much from the Day Star, is a recipe for blues of astronomical proportions.

Although unbroken cloudiness in winter is perfectly natural and explainable by meteorology, there can also be the added influence of the dreaded New Telescope Syndrome (NTS): whenever someone acquires new optics for stargazing the chances for a long stretch of cloudy nights seem to increase, no matter what season.

One of the members of the Black River Astronomical Society recently purchased a shiny new large Dobsonian—this may have partially accounted for what everyone must now suffer through.

To compound the misery, I admit to going ahead and clicking the mouse on a new pair of large binoculars. What makes it excruciating is that I now have only thirty days to return it if there are any defects, and the most demanding test of optical performance is the Star Test.

The uptick in hits registered by weather.gov/clev and the Oberlin Clear Sky Chart websites comes from my restless mouse, hunting for the promise of a stretch of clear-ish, if not clear, sky, or at least the chance of a sucker hole that will be big enough and last long enough for me to throw a winter coat over my pajamas and robe and see something, anything, for a few fleeting moments. The anticipation is almost unbearable. I would gladly risk frostbite if it meant seeing just enough to find out if the new instrument is up to snuff.

In the meantime, the restless mouse clicks on *Cloudy Nights* and other astronomy sites, on equipment reviews, and then—hitting bottom—clicking on the *Stellarium* icon, setting up fields of view that emulate virtual instruments. If I had a clock driven scope I would be tempted to set it up and track objects on the monitor.

It's already been a long winter.

~Bill Ruth