

Newsletter of  
The Black River Astronomical Society

# Guidescope

Lorain County, Ohio

January 2018

Website: [blackriverastro.org](http://blackriverastro.org)

Newsletter submissions: [Editor](#)

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--Wednesday, January 3, 7 p.m.: Regular meeting, Carlisle Visitors Center.  
Cassini Mission Video, Part 2.

--Thursday, January 11, 7 p.m.: Board meeting, Blue Sky Restaurant,  
Amherst

--Friday, January 19, 8-10 p.m.: Public observing, Nielsen Observatory  
(cloud backup date Saturday, January 20, 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

December 14, 2017

The December meeting was called to order at 7:09 p.m. with nine Directors present. The minutes from the November meeting were read and approved as was the Treasurer's report. Under Committee reports, Bill Ruth, the *Guidescope* editor, reported that the newsletter was status quo. He is currently sending four newsletters out using the U.S. Postal Service for which he gets stamp and envelope money semi-annually. All the other copies are sent via email. The Website chair, Dan Walker, reported that the website is fully functional with no issues. Our Instrumentation chairman, John Reising, reported that all was well with the observatory except for the deterioration of the inside OSB layer of the roof. The outside of the roof is holding up well, and all instruments are operating well. There was a brief discussion about the mold on the inside of the corrector plate of the orange tube C-14, but Schauer recommended discussing that in Old Business. The OTAA Chair and the Metro Parks liaison had no reports.

Programming came next and is tentatively set as follows:

Jan.	Lee/Mickey	Cassini video Part 2
Feb.	Open	
March	Open	
April	Dan Stinebring	Update on gravity wave research
May	Rob Owen	TBA
June	John Reising	Mars (opposition July 27 <sup>th</sup> )
July	Mickey Hasbrook	Lowell Observatory

Aug.	Denny Bodzash	TBA
Sept.	Open	
Oct.	Elections, short video, Annual Meeting of the Members	
Nov.	Open	
Dec.	Annual Christmas pot luck dinner at Amherst Beaver Creek	

Old Business followed with the first item being whether we wanted to participate in the Metro Parks Adventure Fest at Mill Hollow where we do solar observing AND also do solar observing on the September 23<sup>rd</sup> date we previously choose, or if we wanted to eliminate the observing on the 23<sup>rd</sup> and count the Adventure Fest as our solar viewing for the month. It was decided to find out if the Adventure Fest date had been set yet and decide depending on that date. Update: Schauer found out that the Adventure Fest for 2018 is set for Saturday September 8<sup>th</sup>. Since this is the date of our OTAA Convention, we will skip the Adventure Fest for next year and leave solar observing on Sept. 23<sup>rd</sup> where it was originally set. It is hoped we can participate in Adventure Fest again in 2019.

The second item of business was the new building proposal that is being worked on. Schauer has input from several Board members and he and Tim Kreja will finish the proposal soon.

The third item of Old Business concerned the Sky Gazers Almanac. President Schauer proposed making copies for all members who attend the January meeting. Tim Kreja volunteered to make the copies.

The final item was the discussion about the orange tube C-14 with the mold on the inside of the corrector plate. The original plan was to send the entire scope in to Celestron to have them clean the scope, repair the dec. lock which is worn, and troubleshoot the hand paddle which operates intermittently. We will also inquire about updating the coatings. John Reising proposed that we send the scope in two boxes. One box will hold the tube which is the box Celestron used to ship the black C-14 back to us two years ago when that scope was sent in for service. This box has custom made foam and etc. inside designed to fit the C-14 tube. The fork mount can then be disassembled and sent in with the motor box in a separate container. John will contact Celestron about this.

Next came New Business with only two items.

The first item was a request by Schauer that Dan Walker enter our Public Observing and Solar Observing dates onto the website calendar, which Walker will do.

The second item was a discussion about our Public Observing date for December which was set for the 15<sup>th</sup>. For some reason (that no one can remember) we set the observing date for Friday the 15<sup>th</sup> with no Saturday back-up date. Since the weather forecast looked poor for Friday, but better for the 16<sup>th</sup>, Schauer proposed we add the Saturday back-up date back into the schedule, and the Board agreed. It was also agreed that the members who attend should bring snow shovels so we could clear the sidewalk and at least one of the concrete pads. Update: We did cancel the Friday observing date and observed on the 16<sup>th</sup>. The seeing wasn't great, but those that attended enjoyed themselves and a couple members of the public did come to enjoy the views.

Dates were set, and the meeting was adjourned.

~Steve Schauer

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## President Trump Wisely Orders NASA to Return to Moon

*(Disclaimer: The following article expresses the views of the author and not necessarily views held by other members of the Black River Astronomical Society.)*

On Monday, President Trump **signed a space policy directive** ordering NASA to send humans to the Moon and eventually to Mars. For manned space exploration enthusiasts, this is the first bit of good news to come about in over a decade since when then-President Bush created the Constellation Program, which sought the same goal by 2018, which is now here.

Hopefully, this plan will not be killed after Trump leaves office in the way former President Obama killed Constellation after he took office because this plan makes a lot of sense.

After killing Constellation, supposedly due to timetables not being met and cost over runs (since when has money been a concern for government), Obama set us on an aimless course into the cosmos. The plan: go to an asteroid to prepare for a Mars mission. This later morphed into a ludicrous mission of towing an asteroid into low-Earth orbit to make training easier before going to Mars.

Besides being completely impractical with today's technology, going to an asteroid to prepare for Mars is the dumbest idea in the history for space exploration.. Why? The two bodies are nothing alike. Mars has the gravity equivalent to about 38% of that of Earth, meaning a 100 pound human would weigh 38 pounds on Mars. The largest asteroid, now officially 'dwarf planet,' Ceres, is only 2% that of Earth. The smaller moon of Mars, Deimos? Try 3/1000th that of Earth. As for an asteroid small enough to be towed to Earth? Infinitely smaller.

This begs a question: why on Earth would you practice for a mission to a body that has 38% of Earth's gravity on a body that may have 1/10,000th of Earth's gravity? Duh, you don't.

As for the Moon, it has about 16% of Earth's gravity which, though still less than half of that of Mars, is still way better than an asteroid because going to an asteroid (wherever it is) and then straight to Mars isn't really practice because the two are so different. By going to the Moon first, testing equipment for exploration, housing, and growing food makes a lot more sense because of the Moon's greater size.

Additionally, NASA can set up long-term expeditions to the Moon much in the way it does the ISS to make absolutely positively sure that everything works without fail so that when we finally do go to Mars, we know that the equipment will work. If something were to

go wrong, it is much better to be 3 days away from Earth than a minimum of 4 months away from Mars (Mariner 7 made the trip in just 128 days while Viking 2 took a snail's pace 333, roughly 11 months).

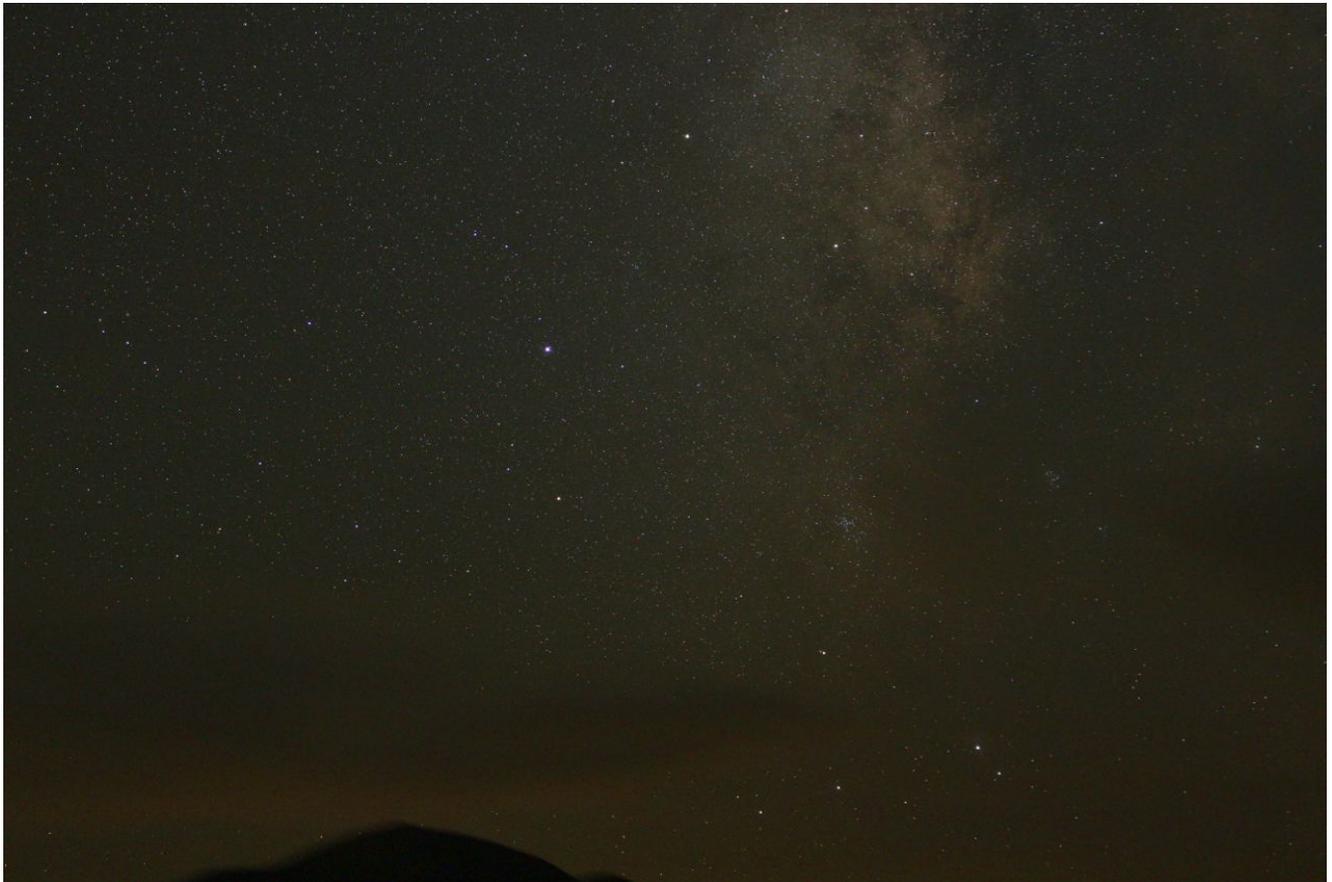
The president is right: America needs to take bold steps to reassert its dominance in space. Hopefully Congress will agree and pony up the cash needed to do so. If Congress goes along, Trump will be remembered as the 21st century Kennedy, not as every president from Johnson to Obama. Remember, if JFK had lived to serve two terms, we would have been on the Moon just months after he had left office.

The Space Race of the 60s proves that we are capable of great things when we try. Hopefully we will be willing as a nation to do it again with the same drive of half a century ago.

Link: <https://www.space.com/39055-trump-space-policy-moon-return-reactions.html>

~Denny Bodzash

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Here is the spout of the "Teapot" of Sagittarius along with a view of M7 (Ptolemy's Cluster) and M6 lower center right. 10/17/17, 800 ISO, 140sec, 55mm. Taken by Dave Lengyel at Pahrump, Nevada.



Canis Major 219 sec, 800 ISO, 52mm.

Taken by Dave Lengyel in Pahrump, Nevada.

Note many open clusters, including the lovely contrasting pair M46 and M47 in upper left.

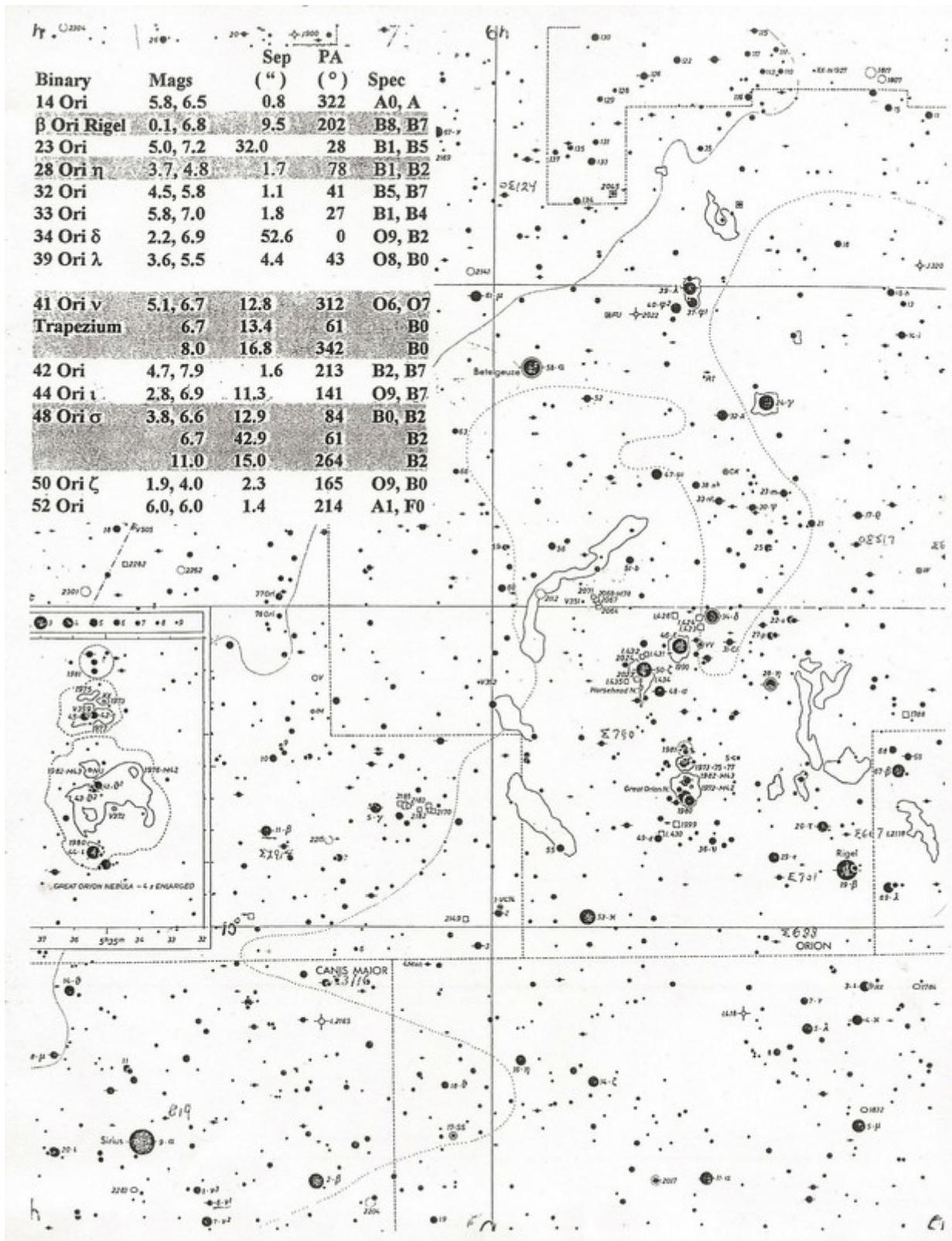
## **"Caroline's Rose" *An interpreted illustration of NGC 7789 by Kelly Ricks.***

A firsthand view of nighttime objects—whether seen unaided, or through a telescope—is usually much different than what appears in a photograph. The way our eyes receive light and the way our brains interpret that light can cause planetary nebulae to blink in and out of existence, and distant star clusters to shimmer like sunlight over crystals of ice. In the following sketch, I tried to illustrate that kind of tenuous shimmer as seen in the open star cluster "Caroline's Rose": NGC 7789 (named for its discoverer, Caroline Herschel). Though I'd seen a few pictures of this cluster, it was a new telescopic target for me, and was on a short list of objects I wanted to look for when I took my telescope out on the evening of December 13, 2017.

Within the dark high-desert skies of Bandelier National Monument, the cluster appeared as a little fuzzy blur just off one leg of Cassiopeia's "W." On the night of my observation, it was riding high in the north, as close to zenith as I could hope. I fitted a low-power wide-field eyepiece into my focuser and zeroed in. As my eyes acclimated to the view, I was stunned to see marbled veins of interstellar dust coiling and snaking over a dense starry field. The result really did look like a rose! The stars were so plentiful and faint that outward from the cluster's center, their light seemed to blur together into luminous islands edged by a maze of inky waterways. These filaments of dust weren't exactly easy to see, but with steady skies, ample time at the eyepiece, and a little averted vision, the detail that emerged was stunning.

I began sketching the following morning, referencing photos of the cluster I found online, and otherwise working from memory to achieve the specific effects of light and shadow I'd noticed the previous night. The result is a mix of reality and imagination that, though slightly outside the precision of a photo, hopefully still conveys something of the immersive fascination I felt upon first viewing this unique object.





Constellation of the Month (Orion) courtesy of John Reising.

## Deep-Sky Objects for January

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

DSO chart courtesy of Len Jezior.

## **A Timely Executive Order**

(Disclaimer: the following rant expresses views of the author, and not necessarily the views held by any other member of the Black River Astronomical Society.)

As a malfunctioning clock might occasionally show the correct time, our current POTUS is capable of occasionally doing something that might actually contribute to the common good, as Denny Bodzash's article illustrates.

Let's try to harness this farce of nature while it lasts.

The trick is to plant a suggestion that will grab his attention via the television shows, Twitter feeds and websites he frequents. If it happens to be the last thing he sees on any given day, there's a good chance the suggestion will remain in his mind long enough to become something upon which he may act.

While there is still a window of opportunity to influence such a highly-suggestible leader of the free world, we should take full advantage of it and have one of the great scourges of modern life be banned by royal decree:

Daylight Savings Time.

If you can spare a moment to write about abolishing DST to the Dear Leader, either directly c/o the White House, or indirectly via Twitter or alternative-fact websites, it will increase the chances that we may yet be rid of one of the most disgraceful laws of the land from which we must needlessly suffer every year.

Now is the time for all good amateur astronomers to come to the aid of their country, believe me.

~Bill Ruth