

Newsletter of
The Black River Astronomical Society

Guidescope

Lorain County, Ohio

December 2019

Website: blackriverastro.org

Newsletter submissions: [Editor](#)

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--Wednesday, December 4, 7 p.m.: **Holiday Potluck**, Beaver Creek Reservation, 913 N. Lake St., Amherst (on east side of Lake St. just south of the Route 2 Oak Point Road ("North" North Lake St.) exit. Bring a dish to pass, and your own plates/sporks/napkins/beverages.

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

--Friday, December 20, 8-10 p.m.: Public Observing, Nielsen Observatory (cloud backup Saturday, December 21)

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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.

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

BOARD SUMMARY November 14, 2019

The meeting was called to order at 7:16 p.m. with eight Directors present. Secretary Bill Ruth provided copies of the October minutes which were read and approved, and Treasurer Dan Walker shared his Treasurer's Report. Members are reminded that dues are now \$20 and were due in October. Committee reports followed with Bill Ruth reporting that the newsletter was status quo with some member submissions. The website is also believed to be operating correctly. Under Instrumentation, John Reising reported that he would prefer to trade Oberlin College the recently donated 10' Newtonian in exchange for the Wheely Bars, rather than the 8", which the Board approved. Next, it was decided to move the components of the 16" Newtonian to the Nielsen on Monday Nov. 18th at noon for assembly. We will also move the 8" f23 Lucas Scope at the same time. We had planned on moving the 16" on a weekend, so we could organize the observatory at the same time and start making decisions about what to keep, what to donate and what to move into the new storage building. However, the cold and rainy November weather intruded, and it was decided to use the 18th to move the scopes because it was going to be a warm, sunny day. The OTAA Chairman reported that we have two dates for OTAA conventions in 2020, MVAS on August 15th and BRAS on Sept. 19th. The Board then selected a date for our 2021 OTAA and chose Sept. 4, 2021 which is a Saturday with a waning crescent Moon that will be 8% illuminated. The OTAA Liaison had no report.

Programing is as follows:

December	Annual Holiday Pot Luck at the Amherst Beaver Creek Reservation. 7:00 p.m.	
January	Video	
February	OPEN	
March	Dave Lengyel	Measuring Distances in Astronomy
April	Ed Burcl	Asteroid Mining
May	John Reising	Life of William Herschel
June	Denny Bodzash	Wierdest Ideas in Astronomy
July	Mickey Hasbrook	Trip to Pahrump 2019
August	John Reising	Mars Opposition
September	Steve Schauer	Member Forum or TBD
October	Annual Meeting of the Members/ Elections/ video	
November	OPEN	
December	Annual Holiday Pot Luck	

Old Business was next with a work party at the Nielsen Observatory being the first item of discussion. We need to go through the contents of the observatory and decide what things to keep, what items to make available to members who might want them and what items to discard. We will also need to bring to the Nielsen various items of club property that we have been storing at home now that we have the new storage building. We will need to build a loft to utilize the excellent height of the new building which will be used for bulky items we don't often use, and we need to decide on how to store other items...either on shelves, in plastic bins, or both. Realistically, much of this work will likely need

to be postponed until spring, now that the weather has turned. We will also need to decide on whether to continue to keep a formal inventory of club property or not and, if we are going to continue to keep such an inventory, how best to keep it, i.e., in a card file in the observatory or computerized in the cloud. An inventory isn't much use if it isn't carefully kept up to date, which is something we haven't been doing.

New business followed with the first item being selecting dates for Solar Observing for 2020.

The chosen dates are:

May 16	Saturday	LCMP Adventure Fest	Mill Hollow	10:00 AM-3:00 p.m.
June 14	Sunday	Sandy Ridge Reservation		1:00-4:00 p.m.
July	Sunday	Sandy Ridge Reservation		1:00-4:00 p.m.
Aug. 16	Sunday	LCMP Sunset Beach Festival-Lakeview Park		4:00-8:30 p.m.
Sept. 6	Sunday	Sandy Ridge		1:00-4:00 p.m.
Oct. 4	Sunday	Sandy Ridge Reservation		1:00-4:00 p.m.

The final item of New Business was a discussion of possible programs for the August and November General Meetings. Schauer reminded the Board of the results of the member survey where we asked what programs members were interested in. The results with the most interest were:

How to observe deep sky objects

Astrophysics and theory

Astrophotography equipment and how-to

Astronomy equipment and accessories

Space Program esp. the Orion spacecraft and the Space Launch System

How to build a back yard observatory

Directors were asked to give some thought to topics for these two meetings, and club members are asked to consider providing a talk on these or any other topic of astronomical interest. Please contact the President or any other Board member if interested. Steve Schauer's email:

BRASPres@gmail.com

December dates were set, and the meeting was adjourned at 8:32 p.m.

~Steve Schauer

16” Newtonian Reflector being Readied for Use

On Monday November 18th, available Board members met at the observatory to start assembling the components of the 16” Newtonian. John Reising and Greg Cox brought the 16” and the 9” Lucas scope to the Nielsen where they were met by Greg Zmina, Dan Walker, Jeff Walsh, Dianna Richardson and Steve Schauer. Together, the group cleaned the mount and the telescope tube which have been in storage, and started the assembly process. The mount was fitted to the new Wheely Bars that were modified to fit the mount by Greg Cox. The tube was then secured onto the mount using web straps created by John Reising, and the counter weights were installed. Next, the 30 pound mirror in its

cell was mounted in the base of the tube and the secondary mirror was installed. The tube was then rebalanced to account for the weight of the mirror. At this point, the basic scope was complete.

Work still needed to be done includes finding a power cord, and collimating the mirrors. At that point the scope can be used manually. However, the scope is a computerized “push-to” with encoders for both axes, motors for both, and a hand paddle, all of which we have. What we don't have are directions or diagrams for properly connecting and wiring the encoders, dec motor, etc. nor do we have instructions on using the hand paddle. We will need to obtain these from Meade or some other source and then assemble and wire these items. A “push-to” computerized scope needs to be aligned on two stars (so it “knows” where it is pointing) and then items to observe can be entered using the hand controller. Once that is done, the scope is moved manually in each axis one at a time, while watching the readout on the hand paddle. As the readout numbers get smaller the scope is being moved in the right direction, and one continues to move it until the readout reaches zero. Then the scope is moved in the other axis until the numbers read zero. At that point, the chosen object should be in the field of a wide angle eyepiece. The advantage of a computerized scope, of course, are that one doesn't need to know the sky well to find objects to observe, and finding objects, especially dim ones on nights that are not as clear as one would like, can be done much faster. These are especially nice advantages when we have a large crowd waiting to see new objects in the scopes, so we are excited to get the electronics into action. More details on this scope will be forthcoming as we continue the assembly.



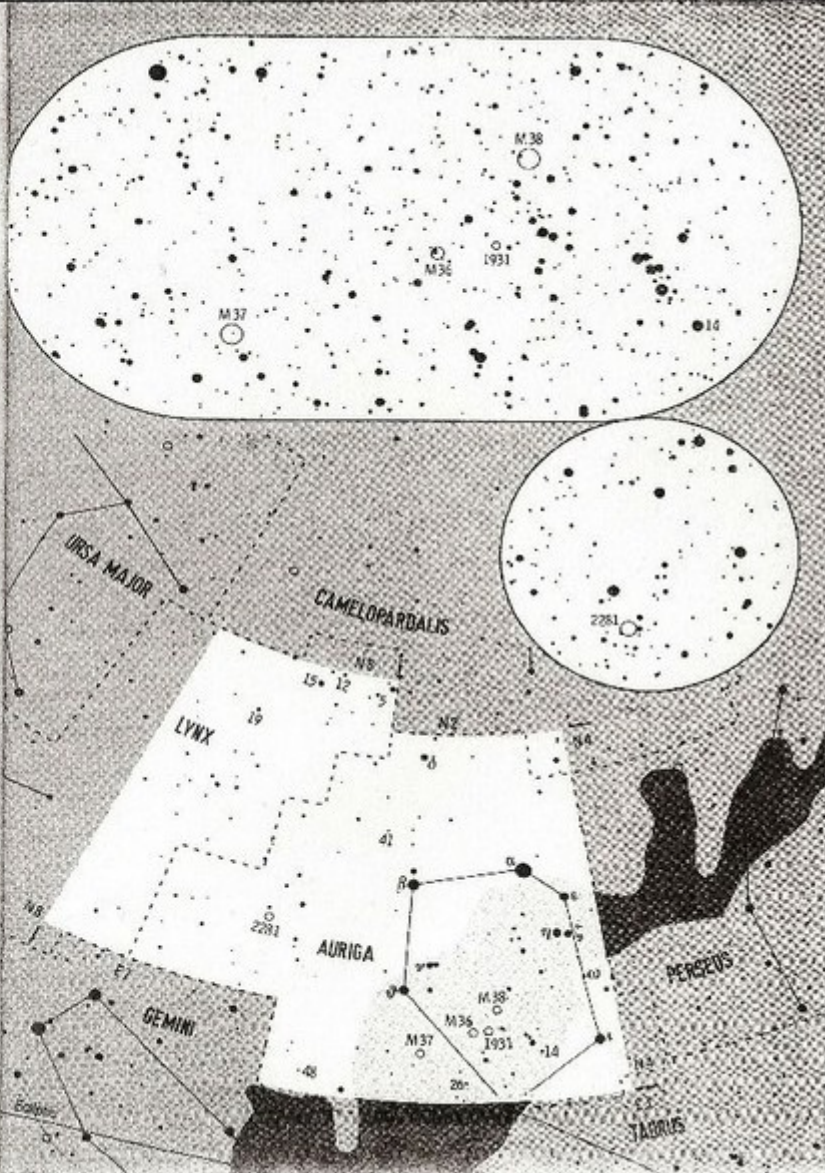
N6 Northern Sky Winter Constellations

NEBULA	Position	v-Mag.	Size	Shape	Type	Vis.	Dist.	R.A.	Dec.
1912 M38	Aur	6	12/α'	20'	0 m	OC	4000ly	5 28.7	35.83
1931	Aur	10	11	2.5	0 Em	DN	6000	5 31.4	34.23
1960 M36	Aur	6	12	15	0 m	OC	4000	5 36.1	34.13
2099 M37	Aur	6	12	25	0 r	OC	4000	5 52.4	32.53
2281	Aur	6	12	20	0 p	OC	2000	6 49.3	41.07

1912 M38 Partially resolved in binoculars, interesting grouping of faint stars.
 1931 Small faint diffuse nebula, imbedded stars visible at high power.
 1960 M36 Some stars resolved in binoculars, about 60 stars in a telescope aligned along arms, deficiency of faint stars, central condensation.
 2099 M37 Binoculars show a large oval glow, which turns into an amazing number of stars in a telescope, a yellow mag. 9.1 star is centered.
 2281 A few bright, irregularly scattered stars in binoculars, oval core.

STAR	Position	V-Mag.	B-V	Tc.	Abs.	Name	Dist.	R.A.	Dec.
3 α	Aur	2.7	1.5	-3	500ly			4 57.0	33.17
4 ω	Aur	4.9	0.0	1	160			4 59.3	37.89
7 ε	Aur	3.0-3.8	0.5	-7	3000			5 02.0	43.82
8 ζ	Aur	3.7-4.0	1.2	-3	800			5 02.5	41.08
10 η	Aur	3.2	-2	-1	220			5 06.5	41.23
14	Aur	4.9	0.2	0	270			5 15.4	32.69
13 α	Aur	0.1	0.8	0	42	Capella		5 16.7	46.00
26	Aur	5.4	0.4	0	450			5 38.6	30.49
32 ν	Aur	4.0	1.1	0	220			5 51.5	39.15
33 ε	Aur	3.7	1.0	1	140			5 59.5	54.28
34 β	Aur	1.9	0.1	0	82	Menkalinan		5 59.5	44.95
37 ρ	Aur	2.6	-1	-1	175			5 59.7	37.21
41	Aur	5.8	0.1	1	300			6 11.6	48.71
5	Lyn	5.1	1.5	-2	650, 1500			6 26.8	58.42
48	Aur	4.9-5.8	0.7	-4	2000	RCT Aurigae		6 28.6	30.49
12	Lyn	4.8	0.1	1	230			6 46.2	59.44
15	Lyn	4.4	0.8	1	170			6 57.3	58.42
19	Lyn	5.3	-1	1	500			7 22.9	55.20

BINARY	Position	V-Mag.	B	V	Tc.	Sep.	PA	Vis.	VARIABLE STAR
4 ω	Aur	5.0	8.0	0.0	0.5	11	4.9	•	7 ε Aur
14	Aur	5.0	7.9	0.2	0.4	11	14.3	•	Min. July 2010
37 ρ	Aur	2.7	7.1	-1	0.5	11	3.6	•	Eclipse 22 months
41	Aur	6.2	7.0	0.1	0.2	11	7.6	•	8 ζ Aur
5	Lyn	5.2	7.8	1.5	1.1	95		•	Period 972.2 d
12	Lyn	4.9	7.2	0.1	0.3	11	8.9	•	Min. 2451997
		5.4	6.0	0.1	0.1	11	0	•	Eclipse 40 days
19	Lyn	5.4	7.6	-1	0.0	11	213.5	•	48 RCT Aur
		6.8	6.8	-1	0.0	11	14.8	•	Period 3.7261 d
									Max. 2451200.9



Thanks to John Reising for Constellation of the Month.

Deep-Sky Objects for December

Objects for Binoculars							
02 ^h 19.0 ^m	+57° 09'	NGC 869	5.3v	29'		Per	Open Cl 200• Double Cluster
02 ^h 22.4 ^m	+57° 07'	NGC 884	6.1v	29'		Per	Open Cl 115• Double Cluster
02 ^h 42.0 ^m	+42° 47'	M34	5.2v	35'		Per	Open Cluster 60•
05 ^h 03.4 ^m	+60° 27'	Beta	4.0, 8.6	80.8"	208°	Cam	Double Star
05 ^h 06.1 ^m	+58° 58'	11 & 12 Cam	5.4, 6.5	108.5"	8°	Cam	Double Star
05 ^h 44.5 ^m	-22° 27'	Gamma	3.7, 6.3	96.3"	350°	Lep	Double Star
Objects for Small Telescopes (2-6 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
04 ^h 07.0 ^m	+60° 55'	NGC 1501	11.5v	51"		Cam	Planetary Nebula
04 ^h 07.7 ^m	+62° 20'	NGC 1502	5.7v	7'		Cam	Open Cluster 45•
06 ^h 18.7 ^m	+78° 21'	NGC 2146	10.6	5.4'x4.5'		Cam	Galaxy
05 ^h 14.5 ^m	-08° 12'	Beta	0.1, 6.8	9.5"	202°	Ori	Double Star Rigel
06 ^h 08.4 ^m	+13° 57'	NGC 2169	5.9v	6'		Ori	Open Cluster 30•
07 ^h 27.1 ^m	+80° 11'	NGC 2336	10.4v	6.4'x3.3'		Cam	Galaxy
Objects for Medium Telescopes (8-14 inch)							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
04 ^h 32.8 ^m	+78° 53'	NGC 1560	11.4v	9.2'x1.7'		Cam	Galaxy
05 ^h 24.5 ^m	-24° 33'	M79	7.8v	8.7'		Lep	Globular Cluster
05 ^h 46.7 ^m	+00° 03'	M78		8'x6'		Ori	Emis. & Refl. Nebula
05 ^h 27.5 ^m	-12° 42'	IC 418	9.3v	12"		Lep	Planetary Nebula
05 ^h 33.4 ^m	-21° 57'	NGC 1964	10.7v	5.0'x2.1'		Lep	Galaxy
07 ^h 28.9 ^m	+69° 13'	NGC 2366	10.8v	8.2'x3.3'		Cam	Galaxy
Objects for Larger Telescopes (16-inch & larger) Challenge Objects							
RA	Dec	Number	Mag(s)	Size/Sep.	PA	Const.	Type of Object
03 ^h 46.8 ^m	+68° 06'	IC 342	8.4v	22.0'x22.0'		Cam	Galaxy
05 ^h 00.0 ^m	-26° 01'	NGC 1744	11.3v	5.1'x2.5'		Lep	Galaxy
05 ^h 06.9 ^m	-03° 21'	NGC 1788		5'x3'		Ori	Reflection Nebula
05 ^h 42.1 ^m	-09° 05'	NGC 2022	11.9v	11.9v		Ori	Planetary Nebula
06 ^h 13.8 ^m	+12° 48'	NGC 2194	8.5v	8'		Ori	Open Cluster 80•
07 ^h 36.9 ^m	+65° 36'	NGC 2403	8.5v	25.5'x13.0'		Cam	Galaxy

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

Thanks to Len Jezior for Deep Sky Object charts.

Bugs on Mars? Ohio University Entomologist Thinks So

Could there be life on Mars in the form of insects? William Romoser, professor emeritus who specializes in arbovirology (the study of viruses transmitted by arthropods) and entomology at Ohio University thinks so. In a recent study, Romoser has collected photographs from NASA's Mars rovers that he says point to evidence of life on Mars.

In a public statement via Ohio University's website based upon findings [he presented](#) on November 19 at a meeting of the Entomological Society of America, Romoser went so far to say that "there has been and still is life on Mars."

So, could there be anything to the professor's idea?

There is no doubt as to [Romoser's credentials](#). Rosomer completed both undergraduate and graduate studies at Ohio State, earning his doctorate in 1964. Following this, he served at Ohio State University along with the Universities of Florida and Georgia for short stints before joining the Army's Medical Research Institute for Infectious Diseases, where he worked for 20 years before joining Ohio University as an emeritus professor of medical entomology. In that time, he has published dozens of peer-reviewed papers.

That said, in science, reputation is no protection against criticism, which seems to be playing out following Romoser's incredible claims.

Following Romoser's presentation, which quickly went viral in major media outlets, other scientists have been coming out of the proverbial woodwork to offer their own takes on exactly what Romoser was seeing, or what he thought he was seeing.

The common thread among critics: pareidolia. What is pareidolia? It is the act of perceiving things via sight that don't really exist. Common examples include seeing a face in the Moon and shapes in clouds. Yes, we all know that there is no Man in the Moon and that there really isn't a tree (or whatever else) in the clouds but, as we all know, we sure do perceive these things as being there. A very famous case of Martian pareidolia is the 'Face' on Mars, which was first seen during the Viking missions in the mid 1970s but that was later shown via higher resolution photographs to be nothing more than just the average hill hit with a convenient angle of sunlight. As for Romoser, many critics think that what he is seeing on Mars is nothing more than bits of rock that look like insects, which would be easy for him to notice after 50+ years spent looking at insects here on Earth.

While the criticism was to be expected, an unexpected development is that important web pages about this story are now gone. As of this writing (November 23, 2019), the web page on Ohio University's website detailing Romoser's presentation [has been removed](#). Even more curiously, Romoser's own website [is now offline](#), showing that both the professor and the University appear to be feeling a lot of heat from the wider scientific community.

As for NASA, the space agency has issued [its own rebuttal](#) to Rosomer's claims but says that its upcoming rover, set to land in February, 2021, will be equipped to [look for signs](#) of ancient Martian life.

~Denny Bodzash



Insect-like fossil

head

thorax

abdomen

Wing

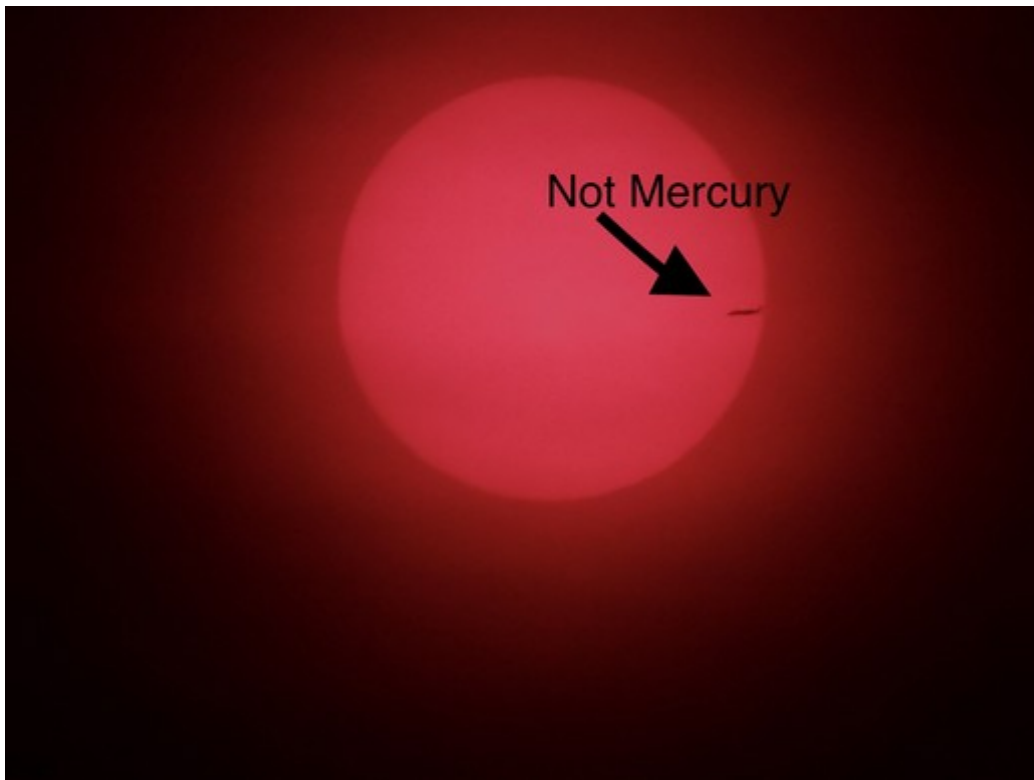
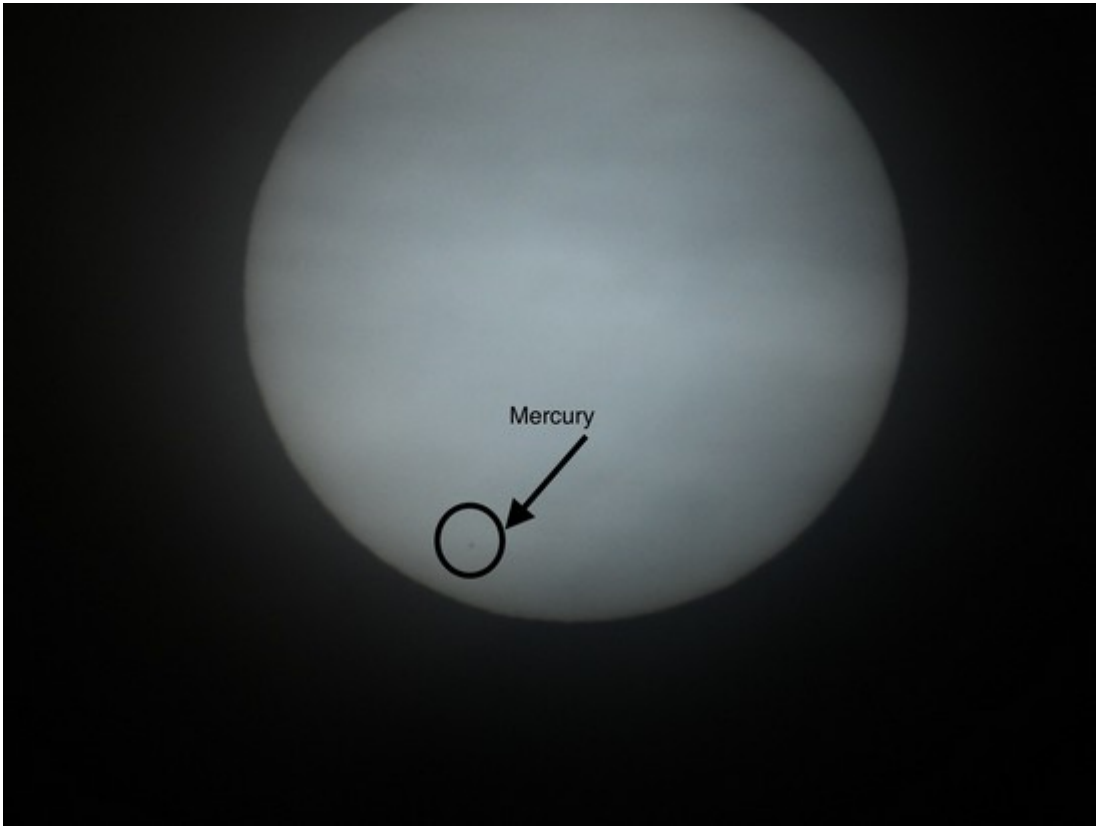
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see poster for more detail

Mercury Transit Images



November 11, 2019 12:54:55 / 13:03:18, Canon 7D Mark II, Meade 203mm LX200GPS
1/1250 second, 1260mm, F/6.3, ISO 200, near Kimbolton, Ohio ~Dave Gulyas



Images taken in Atlanta, Georgia, 11/11/19 by Laura Goyanes



Mercury transit, imagined in Brighton, Ohio, November 11, 2019 by Dave Lengyel

Ash Meadows Images



Lepus region on the morning of 10/17/19. 4:49 a.m. 110mm using the Pentax K3ii with Astrotracer. 800 ISO for 131s. Check out the cool meteor! HR 1944 is included, the multiple (maybe) star system, about halfway up from the center of the image. ~Dave Lengyel



Owl Cluster a.k.a. ET Cluster

Dave Lengyel, Ash Meadows, NV 10/29/19

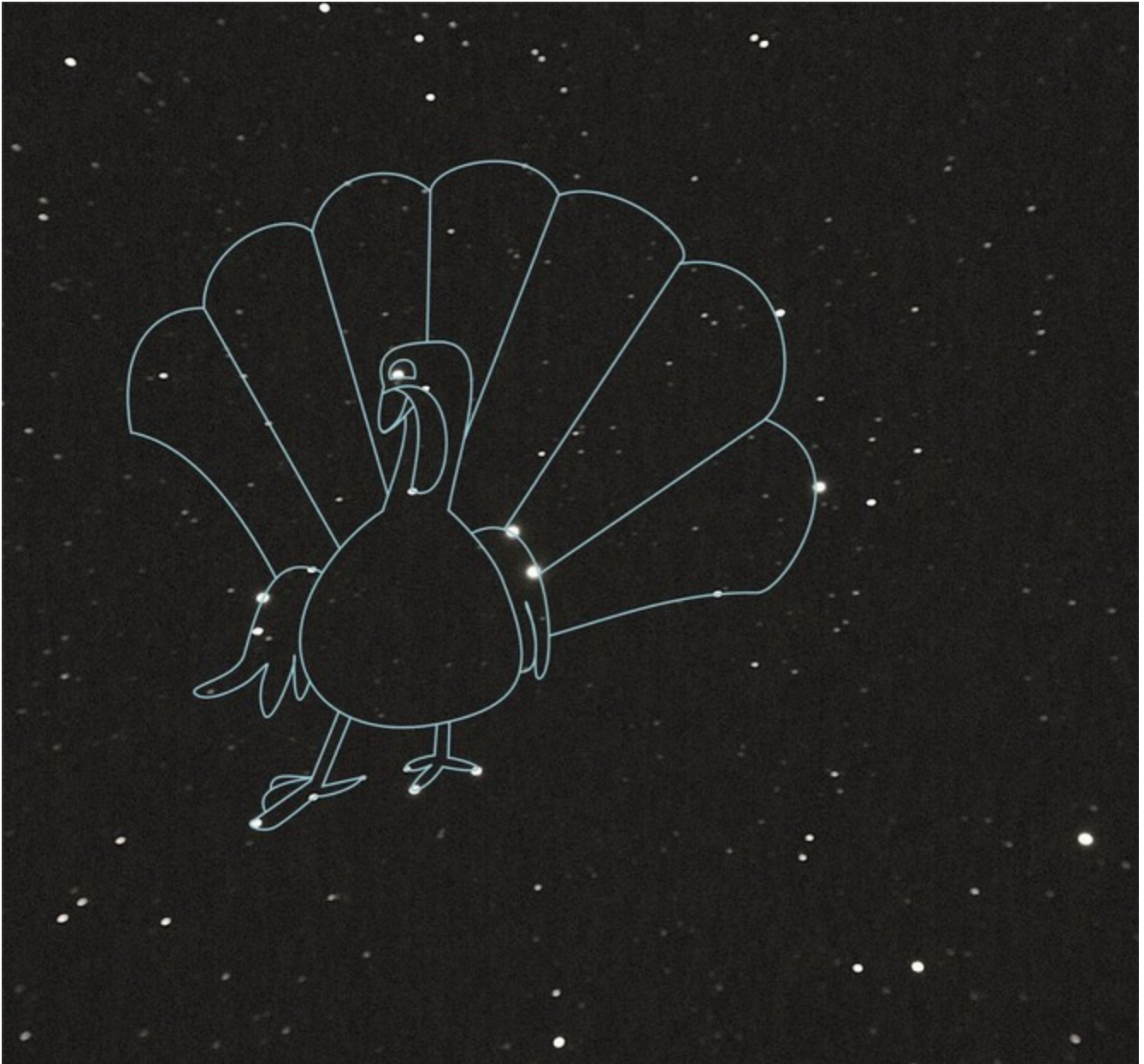


Screen grab from time lapse of star party taken by Ash Meadows naturalist Peter



Sagittarius and Jupiter from Dante's View, Death Valley, on 10/28/19. 68s, 35mm 7:09 p.m. using Pentax K3ii with Astrotracer turned on. ~Dave Lengyel

New Asterism Discovered



Collaborating observers Dave Lengyel and Kelly Ricks located the Turkey Asterism in the Hyades cluster.