

Star Dust

Newsletter of National Capital Astronomers, Inc.

capitalastronomers.org

April 2024

Volume 82, Issue 8

**Celebrating 87 Years
of Astronomy**

Next Meeting

When: Sat. Apr. 13th, 2024

Time: 7:30 pm

Where: In-Person and Online
(Zoom)

See instructions for joining the meeting via Zoom on Page 11.

Speaker: Sue Bassett

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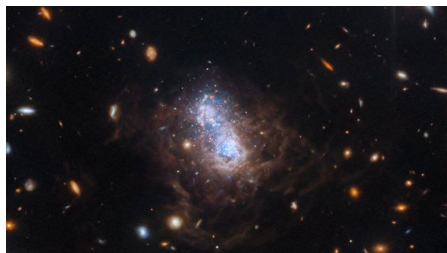


Image Credits - ESA/Webb, NASA, CSA, A. Hirschauer, M. Meixner et al.

The James Webb Space Telescope captured the above image of an extremely low-metallicity, irregular galaxy, I Zwicky 18, which lies approximately 59 million light years away. The galaxy core has two starburst areas. More info is at <https://esawebb.org/videos/potm240>

What Killed the Woolly Mammoth? An Astronomical Suspect

Sue Bassett



Image Credit - Explosion credit - USACE.ARMY, Mammoth credit - Restavr, Dreamstime.com

Abstract: During the Pleistocene, the ecosystems of most of Earth's land masses were dominated by huge animals collectively known as megafauna – giant lions, sloth, camels, wolves, and, most importantly, lots of species of mammoths, mastodons and true elephants. Then, about 13,000 years ago, nearly all of these large animals suddenly vanished.

The traditional explanation has been that early humans caused these extinctions by overhunting, although a minority opinion blamed a sudden climate change known as the Younger Dryas. But in 2007, Richard Firestone et al. proposed that the megafaunal extinctions were caused by a comet impacting the earth. While still controversial, there is accumulating evidence supporting this Impact Hypothesis.

I will be discussing the pros and cons of these three competing hypotheses and how the extinctions of these giants paved the way for modern civilization.

Biography: My interest in astronomy was sparked by growing up in a rural area of Illinois where the night skies were very dark. I have had a lifelong interest in the subject, although it was never my profession.

In high school, I took a course in the ecology of the tall grass prairie, and I became interested in how Illinois had been shaped by the actions of Pleistocene glaciation. After graduating from Illinois State University with

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[3a/](#).

Recent Astronomy Highlights

JWST Finds Complex Organic Molecules Around Two Protostars

Astronomers have used the Mid-Infrared Instrument on the James Webb Space Telescope to study the protostars catalogued as IRAS 2A and IRAS 23385. In doing so, they have discovered ethanol, possibly acetic acid and other complex organic molecules, COMs, in icy or solid forms. Exoplanets have not yet formed in either system, however the detected molecules may become part of such new worlds in the future. The discoveries give clues to a question that astronomers have asked – Do such COMs form in the gaseous or solid phase? The detection of these molecules in icy forms seems to indicate that they came about on the surfaces of such ices. Since the same compounds have also been found in gaseous phase in other places, it is speculated that the ices sublimate over time or form into comets which may end up becoming part of future worlds forming as the protostar systems age. More information can be found at

<https://science.nasa.gov/missions/webb/cheers-nasas-webb-finds-ethanol-other-icy-ingredients-for-worlds/>

Measuring the Speed of Jet From 'Cosmic Cannibals'

Astronomers claim to have measured the speed of jets leaving neutron stars. The jets are created when those neutron stars siphon gas off of companion stars that they orbit, thus receiving the title of 'cosmic cannibals'. Some of this gas is then ejected via jets. In addition, if the gas reaches a critical level a runaway nuclear-fusion reaction can begin, causing an explosion that can inject a large impulse of matter into the jets. By using the Australia Telescope Compact Array and the European Space Agency's (ESA's) Integral satellite to observe the additional material launched outward in the jet, the astronomers were able to clock its speed at 114,000 kilometers per second, nearly 40% of the speed of light. More information about the study can be found at

<https://www.eurekalert.org/news-releases/1039291>.

Abstract and Biography – continued from page 1

a B.S in biology with a chemistry minor, I spent eleven years mainly doing analytical chemistry. I then switched fields, got my M.S. in Computer Science from Johns Hopkins, and spent the rest of my career in that field.

Interesting jobs have included twelve years at Johns Hopkins School of Medicine (seven in cardiology research and five in immunogenetics), seven years at Goddard Space Flight Center, and a stint as sys admin for NOAA's weather predicting supercomputer. Now retired, I enjoy researching science topics I did not have time to study while I was working.

President's Corner

Guy Brandenburg

NCA OFFICER AND TRUSTEE NOMINATIONS

I am happy to announce that we have a full slate of nominees, including Carl Biagetti for Vice President, and Chong Wang for the Trustee position that expires in 2028.

Being Vice President is arguably the hardest job in our club: finding nine good speakers on astronomy or related fields, each year, who are willing to talk to a smallish audience, on a Saturday night, for free (except for a 1-year membership, their choice of NCA swag, a one-year subscription to Sky & Telescope, and maybe a free dinner).

However, we are surrounded by institutions involved in space science and astronomy, and many of the scientists, engineers, and others do LOVE to talk about their work.

If we had no monthly talks, then we would pretty much need to disband the NCA. *

And as you may recall, our current VP, John Hornstein, has announced it was time for him to retire from that post.

Jim Simpson and Milt Roney massaged the NCA membership list and produced a list of about 40 names of members who had said, in their interest questionnaires, that they might possibly consider helping with club functions in some way. Each of the 10 people on the nominating committee, including myself, got four names to try to call.

Carl Biagetti just happened to be the very first person on my list of four names. During our conversations, he told me he had retired as a senior systems engineer at the Space Telescope Science Institute. He once made a mirror in the NCA telescope workshop under Jerry Schnall, and often brings scopes to Exploring the Sky in Rock Creek Park. He also volunteers along with Jay Miller and others in public solar observing on weekends, at the relatively new Eisenhower Memorial in DC. He indicated that his many contacts in the large community of astro-related institutions in the region would make recruiting speakers relatively easy.

He wavered on whether he would take on the job. He then spoke/texted with our retiring VP, John Hornstein, and with Elizabeth Warner, Director of the University of Maryland Observatory where we have our meetings, and who recruited speakers for many, many years both for NCA and the observatory.

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Exploring the Sky



2024 Exploring the Sky Sessions

- 4 May 9:00 P.M. M44, Leo, Arcturus, M13
- 1 June 9:00 P.M. Leo, Bootes, Hercules, M13
- 13 July 9:00 P.M. Venus, Mercury, Moon, Hercules, M13, Summer Triangle
- 10 Aug. 8:30 P.M. Venus, Moon, Hercules, M13, Summer Triangle, M57
- 7 Sep. 8:00 P.M. Venus, Moon, Summer Triangle, Great Square of Pegasus
- 5 Oct. 7:30 P.M. Summer Triangle, Great Square of Pegasus, M31, Saturn
- 2 Nov. 7:00 P.M. Venus, Summer Triangle, Pegasus, M31, Saturn

Exploring the Sky is a joint program between the National Capital Astronomers and the National Park Service Rock Creek Park Nature Center and has been run since 1948 at this location, the field at the corner of Glover and Military Roads in the District. There is an adjacent parking lot. It is free and all are welcome who have an interest in observing the heavens. It's not an ideal dark-sky location but we can see Solar System objects, open and globular clusters and maybe a fuzzy galaxy or two.

As an added feature, you can also come one hour early and see a planetarium program in the Nature Center. Also, if the sky is cloudy or it's raining there will still be a planetarium program at that one-hour earlier time so Exploring the Sky will no longer be canceled!

Planetarium programs can be found at: www.nps.gov/rocr/planyourvisit/calendar.htm. You can also search "astronomy", "dark skies" or call the Nature Center at: (202)-8985-6070.

President's Corner – continued from page 2

Yesterday (3/26), Carl said yes!

Chong wasn't on my list, but I asked him if he would be interested. He said he couldn't be VP with so many family responsibilities but agreed to be a trustee. He wrote about himself, "I was trained as a biomedical engineer and currently work on Medicare data as a data scientist. My parents bought me a telescope when I was in middle school, but the GEM defeated me :). I picked up the hobby again during the pandemic because of my daughter's encouragement. My main interests are public outreach and classic telescopes."

Thank you, Carl Biagetti and Chong Wang!

ECLIPSE

By the time this issue of Star Dust appears in your Inbox, the second recent great North American eclipse in a decade will probably have left a shadow on a narrow swath on this continent, amazing millions both inside and outside The Zone.

I think we will all have stories to tell!

Let me know if you have a short video or any photos you would like to share with others at the upcoming meetings (April, May, and/or June)!

CANDIDATES FOR MAY 2024 ELECTIONS TO NCA BOARD

Let us nominate these folks at the upcoming April meeting (4/13) and then formally vote for them at the May meeting, as per the Constitution and By-Laws*. Assuming no election-day surprises, these fine, unpaid volunteers will take office on July 1 of 2024.

1. President	Guy Brandenburg
2. Vice-President	Carl Biagetti
3. Secretary-Treasurer	Jim Simpson
4. Assistant Secy-Treas	Jeff Norman
5. Trustee (expires 2028)	Chong Wang

(Please note that other nominations, including self-nominations, of NCA members for the open offices are allowed for the upcoming election.)

* You can look up the procedures for elections and so on here:

<https://capitlastronomers.org/documents/NCAconstitutionAdoptedNov2011.pdf>

Astronomers Predict Nova

Astronomers are predicting a nova, a sudden brightening of a star, between now and December, one that will be visible to those of us in the Northern Hemisphere. Approximately 3000 light years away lies a binary system known as T Coronae Borealis, or T CrB. Appearing, as the name implies, in the constellation of Corona Borealis, the star system contains a red giant star near the end of its life and a nearby white dwarf. The white dwarf is siphoning gas off of its much larger neighbor. Every 80 years or so, when the gas siphoned off reaches a critical amount on the surface of the white dwarf, it undergoes a runaway fusion reaction, exploding and

Sky Watchers

April/May

Mercury will rise higher in the morning sky as the period progresses until it reaches Greatest western elongation on May 9th (see below). Venus will be very low in the predawn sky, probably not very viewable. Mars also will be in the predawn sky, higher than Venus. Jupiter remains low in the western sky after sunset. Meanwhile Saturn, having transited to the morning sky, will appear higher each morning as the period progresses.

4/22, 23	The peak of the Lyrids Meteor Shower, which produces about 20 meteors/hour, however a near-full Moon will make for difficult viewing conditions.
4/23	Full Moon at 7:50 p.m.
3/25	The peak of the Eta Aquarids Meteor Shower which produces about 30 meteors/hour in the Northern Hemisphere, with more in the Southern Hemisphere. With a nearly new Moon, conditions will be ideal for viewing throughout the night.
4/9	Mercury at Greatest western elongation – The planet will appear 26.4 degrees from the Sun, high in the morning sky.

Time is in EDT (Eastern Daylight Saving Time).

[Astronomers Predict Nova Flaring Between Now and December 2024 – continued from page 3](#)

brightening the white dwarf from a magnitude +10, which is invisible to the naked eye, to a magnitude +2, which is approximately the brightness of Polaris, the North Star. It is expected that this 'new' star will be visible for approximately a week. Then it will dim as the white dwarf starts another cycle of collecting a new layer of gas from its companion star.

Very few such recurrent novae have been found so far, with only five known in the Milky Way Galaxy, however there may be more that periodically flare up over longer periods. The shortness of T CrB's time between novae may be due in part to its being very massive, close to the theoretical limit for white dwarfs.

The northern-sky constellation of Corona Borealis is a curve of stars that lies west of the constellation of Hercules and east of the constellation of Boötes.

A documented observation of what may have been a T CrB nova was made in 1217 by German monks near Augsburg.

More information about the anticipated nova, including a star map of the location of the Corona Borealis constellation, is available at https://blogs.nasa.gov/Watch_the_Skies/2024/02/27/view-nova-explosion-new-star-in-northern-crown/.

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[Recent Astronomy Highlights – continued from page 2](#)

JWST Studies Star-Forming Region in Triangulum Galaxy



Image Credit - NASA, ESA, CSA, STScI

Although numerous star-forming regions have been studied, the process of star formation itself is still very mysterious. The James Webb Space Telescope is allowing astronomers to peer deeper into the mystery than ever before. The image above is of NGC 604, a star-forming region in the Triangulum Galaxy, our second nearest spiral galaxy. NGC 604 contains over 200 massive B-type and O-type young stars, a density of such stars that is not seen in our own Milky Way Galaxy. Prominent bubbles in the gas within the region are being carved out by the hottest of the stars. The orange regions denote the presence of polycyclic aromatic hydrocarbons, or PAHs, which are critical in the formation of stars and planets. More information on NGC 604 and the study of star formation is at <https://scitechdaily.com/decoding-star-genesis-webbs-infrared-insight-into-ngc-604/>.

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Occultation Notes

- D following the time denotes a disappearance, while R indicates that the event is a reappearance.
- The times are for Greenbelt, MD, and will be good to within +/-1 min. for other locations in the Washington-Baltimore metropolitan areas unless the cusp angle (CA) is less than 30 deg., in which case, it might be as much as 5 minutes different for other locations across the region.
- Some stars in Flamsteed's catalog are in the wrong constellation, according to the official IAU constellation boundaries that were established well after Flamsteed's catalog was published. In these cases, Flamsteed's constellation is in parentheses and the actual constellation is given in the notes following a /.
- Mag is the star's magnitude.
- % is the percent of the Moon's visible disk that is sunlit, followed by a + indicating that the Moon is waxing and - showing that it is waning. So 0 is new moon, 50+ is first quarter, 100+ or - is full moon, and 50- is last quarter. The Moon is crescent if % is less than 50 and is gibbous if it is more than 50. E indicates a lunar eclipse is in progress, and the value is the percent of the Moon's disk that is NOT in the umbra. So 0E means during the total phase.
- Cusp Angle is described more fully at the main IOTA Web site.
- Sp. is the star's spectral type (color), O,B,blue; A,F,white; G,yellow; K,orange; M,N,S,C red.
- Also in the notes, information about double stars is often given. "Close double" with no other information usually means nearly equal components with a separation less than 0.2". "mg2" or "m2" means the magnitude of the secondary component, followed by its separation in arc seconds ("), and sometimes its PA from the primary. If there is a 3rd component (for a triple star), it might be indicated with "mg3" or "m3". Double is sometime abbreviated "dbl". Often, rather than the separation, I give "dTime" or "dT", the time difference of the secondary star occultation relative to the primary star's occultation.
- Sometimes the Axis angle (AA) is given. It is the angle measured around the Moon's disk, from the Moon's axis of rotation. It can be used with a lunar map to tell where a star will reappear relative to lunar features.

Mid-Atlantic Occultations

David Dunham

Asteroidal Occultations

2024	Date	Day	EST/EDT	Star	Mag.	Asteroid	dmag	dur.	Ap. s	Location
Apr 8	Mon	3:44	TYC	10.2	28962	2001 FL117	8	0.9	4	RicVA,AnapMD,ePA
Apr 13	Sat	23:49	UCAC4	13.4	33323	Lucaspagan.	3	2.1	9	se+BaltMD,se+wPA
Apr 16	Tue	0:50	UCAC4	11.6	39369	2002 CE13	8	1.6	5	wPA,wMD,n-seVA
Apr 16	Tue	22:16	UCAC4	12.6	3238	Timresovia	6	0.4	7	wPA,Balt-BrIn,MD
Apr 17	Wed	21:26	SAO	8.8	2016	Heinemann	9	5	4	OH,wPA,BWI,OC-MD
Apr 19	Fri	4:55	TYC	9.9	126392	2002 BD3	8	0.6	5	NJ,TwsnMD,LsbGVA
Apr 20	Sat	0:32	UCAC4	12.9	9410	1995 BJ1	5	0.8	8	Man-wdb,VA;LP,MD
Apr 21	Sun	5:38	TYC	11.0	901	Brunsia	4	0.9	6	CV+FB,VA;SMD,CDE
Apr 26	Fri	1:28	TYC	10.8	796	Sarita	3.2	2.6	5	SMD,CVA,CWV,SOH
Apr 27	Sat	3:12	UCAC4	11.8	37323	2001 QY76	8	0.6	7	BV+CP,MD;Srlg,VA
Apr 28	Sun	0:36	TYC	11.7	1772	Gagarin	6	0.4	9	Win-WB,VA;SMC,MD
Apr 28	Sun	3:22	UCAC4	10.9	133545	2003 TB17	8	0.6	6	OC,MD-nRIC,VA
Apr 28	Sun	21:43	EI Tau	9	253	Mathilde	7	1.8	4	wKY,eTN,w-sNC
May 1	Wed	0:09	UCAC4	12.0	6	Hebe	0.2	14	8	NJ,PA,neOH,SMI
May 1	Wed	5:24	UCAC4	13.6	102	Miriam	1.0	5	10	nVA,nWDC,CMD,NJ
May 5	Sun	3:01	TYC	10.1	54900	2001 OL74	8	0.6	5	nNJ;GB,PA;HGR,MD
May 7	Tue	2:56	TYC	11.6	384	Burdigsla	2.4	6	5	SNJ,CMD,DC,nVA
May 8	Wed	1:18	SAO	8.1	19365	1997 VL5	8	0.4	4	nLP,MD;Qo-Mdn,VA
May 8	Wed	23:48	UCAC4	11.7	36940	2000 SA239	7	0.6	8	SNJ;RV,MD;FR,VA
May 9	Thu	3:22	TYC	10.4	48876	1998 HE103	7	0.9	5	SMD,SFB-nCV,VA
May 13	Mon	4:11	UCAC4	13.2	13529	Yokaboshi	4.5	1.7	8	NJ,CMD,nDC,nVA
May 13	Mon	4:20	UCAC4	12.6	1081	Reseda	4.1	14	6	ePA;e+SMD;NN,VA

Lunar Grazing Occultations

2024	Date	Day	EDT	Star	Mag	% alt	CA	Location, Notes
Apr 12	Fri	20:39	SAO	77034	9.2	22+	41	14N Laytnsvil,Laurel,sAnapolis,MD
Apr 14	Sun	23:59	SAO	79264	8.0	43+	25	11N nClrksbg,nColgPrk,swoodmor,MD
Apr 15	Mon	23:13	SAO	80004	8.9	53+	42	13N Boyds,ChevyCh,neDC,Marlton,MD

Lunar Total Occultations

2024	Date	Day	EDT	Ph Star	Mag	% alt	CA	Sp. Notes
Apr 13	Sat	22:30	D SAO	78191	7.7	33+	33	55S A0
Apr 13	Sat	22:47	D SAO	78206	8.0	33+	30	74S K0
Apr 14	Sun	0:27	D SAO	78291	7.7	33+	12	84N K0
Apr 14	Sun	20:49	D X	99111	7.2	42+	62	37S
Apr 14	Sun	20:49	D ZC	1093	6.6	42+	62	37S F8
Apr 14	Sun	23:22	D SAO	79256	7.8	43+	33	74N K0
Apr 14	Sun	23:58	D SAO	79279	8.3	43+	27	86N F0
Apr 14	Sun	23:59	G SAO	79264	8.0	43+	26	11N G2
Apr 15	Mon	0:12	D ZC	1108	7.0	43+	24	60S G8
Apr 15	Mon	0:59	D SAO	79304	8.1	44+	15	35S K2
Apr 15	Mon	21:40	D SAO	79980	7.3	52+	61	42S G8
Apr 16	Tue	2:34	D SAO	80089	7.2	54+	6	61N G5
Apr 16	Tue	22:40	D ZC	1348	8.1	62+	57	47N G5
Apr 17	Wed	1:39	D ZC	1357	7.7	63+	23	26S G0
Apr 17	Wed	22:36	D SAO	98792	7.8	72+	61	34S K2
Apr 18	Thu	21:01	D SAO	99185	7.9	79+	61	83N A3
Apr 18	Thu	23:39	D SAO	99198	7.3	80+	54	29S K2
Apr 20	Sat	0:41	D sigma	Leo	4.1	87+	46	74S B9
Apr 26	Fri	0:04	R ZC	2269	5.4	95-	16	19N B5
Apr 29	Mon	4:03	R ZC	2751	6.7	73-	19	17S G6
May 3	Fri	5:20	R SAO	165283	8.4	28-	17	86N G8
May 4	Sat	5:36	R ZC	3486	7.7	18-	15	34S K2
May 10	Fri	21:07	D ZC	885	5.6	10+	24	89N G7
May 10	Fri	21:18	D SAO	77621	7.5	10+	21	21S M3
May 10	Fri	21:24	D SAO	77639	8.3	10+	20	68S K0
May 10	Fri	21:29	D SAO	77638	8.2	10+	20	52N B8
May 10	Fri	22:18	D 136	Tauri	4.6	11+	11	19S A0
May 10	Fri	22:56	D SAO	77724	7.0	11+	5	64S B1
May 11	Sat	23:07	D SAO	78873	7.8	18+	12	53S A2
May 11	Sat	23:08	D ZC	1056	7.2	18+	12	63S B9

More information at <http://iota.jhuapl.edu/exped.htm>.

David Dunham, dunham@starpower.net

See Page 6 for an explanation of the new formatting for the Occultations list. Please also see <http://iota.jhuapl.edu/exped.htm> for a section on observing the April 8th total solar eclipse near the path edges, just after the grazing occultation section halfway down the page.

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New Format for Asteroidal Occultation Lists in Stardust

David Dunham

Starting this month, I've changed the format for the asteroidal occultation lists to include the asteroid's number that is needed to look up complete event details on Occult Watcher (OW) cloud. To do that, go to the individual events page at <https://cloud.occultwatcher.net/events>; on it, specify the (UT) date of the event using the calendar symbol under "Event date" and the asteroid's number, now given in our list. But to make room for it, I need to give only the star catalog, and not its number; that and its J2000 (ICRS) RA and Dec, as well as Aladin photographic charts, can be obtained from the OW Cloud page for the occultation. Note that UT is 4h ahead of EDT and 5h ahead of EST, so the UT date of most evening events is one day later than our local date. Also, with recent improvement of the accuracy of about 150,000 asteroid orbits using Gaia data, the paths for small asteroids with very narrow paths should be specified at the city, rather than State, level, so for many events, I am now giving airport 3-letter codes and special 2-letter city abbreviations, as explained on the mid-Atlantic occultations page at <http://iota.jhuapl.edu/exped.htm>.

New Polarized Light Image of Sagittarius A*

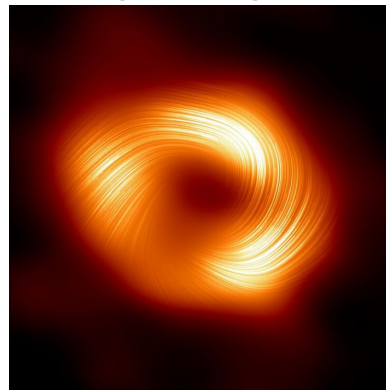


Image Credit - EHT Collaboration/ ESO

The Event Horizon Telescope group, along with the European Southern Observatory, recently released the false-color image above which shows polarized radio waves from Sagittarius A*, the supermassive black hole at the center of our Milky Way Galaxy. A polarized-light image showing the same sorts of strong magnetic fields around the supermassive black hole in the galaxy M87 was released in 2021. The similarity between the images was not a given considering the facts that the two supermassive black holes developed in very different galaxies, M87 being an elliptical galaxy, while the Milky Way is a spiral galaxy, and that M87's supermassive black hole and Sagittarius A* have very different masses, the former being perhaps a thousand times the mass of the latter.

The fact that the radio emissions are so strongly polarized around two such different supermassive black holes seems to indicate that strong magnetic fields are a common feature of supermassive black holes. Astronomers speculate that with these similarities, perhaps Sagittarius A* may have a jet of subatomic particles similar to the one produced by M87's central black hole. So far there is no other evidence of such a jet, but astronomers are sure to keep looking for it.

More information about the image and the findings that have come from it can be found at <https://earthsky.org/space/milky-ways-black-hole-new-image-eh-t-polarized/>.

Hopewell Observatory Open House – April 27, 2024

Guy Brandenburg

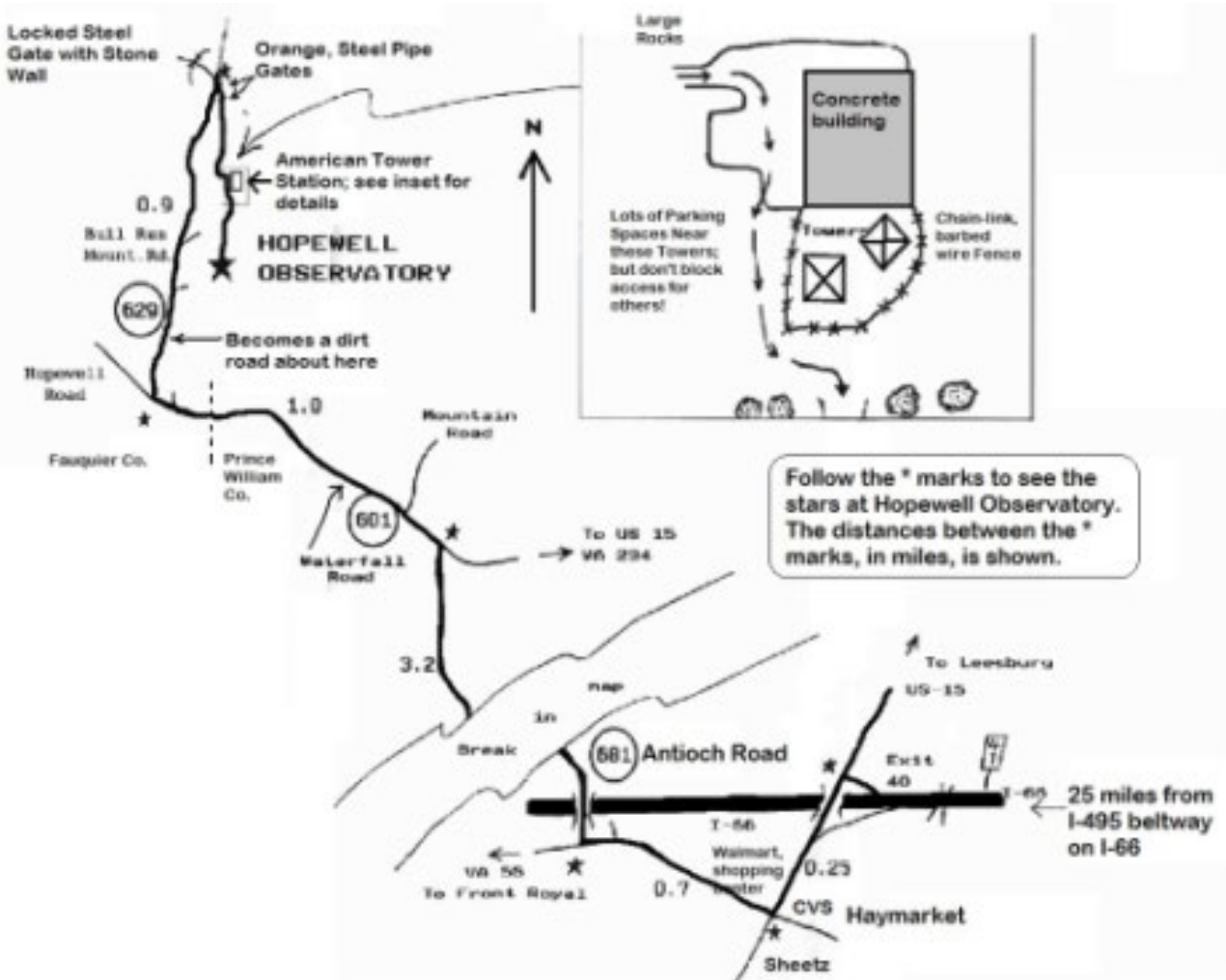
Come to Bull Run Mountain for a free night under the stars looking at a variety of targets using the telescopes at the Hopewell Observatory on the evening of Saturday, April 27, 2024.

You are invited, but will need to RSVP and, in this litigious age, must agree to a waiver of liability for anything that might happen out there in the woods - and the hazards do exist! Plus we don't have running water -- so, we use an outhouse.

But if you take the risk, you, for free, can view Jupiter and its moons, comet 12P/Pons–Brooks, and a bunch of bright open clusters like the Pleiades, Beehive and Orion star clusters — and a gaggle of galaxies and double stars.

Hopewell Observatory was completely built by the hands of its founders and members, starting about 50 years ago. We have a variety of permanently-mounted and portable telescopes of different designs, some commercial and some made by us, some side-by-side, enabling several people to view the same object in the sky with different magnifications.

The date is Saturday, April 27. We suggest arriving near sundown, which will happen near 8 pm. It will get truly dark about an hour later. You can find complete driving and walking directions to the observatory, and the link to RSVP, at this URL: [Astronomical Open House at Hopewell Observatory Saturday, April 27, 2024](https://www.astronomicalopenhouse.com/hopewell-observatory-saturday-april-27-2024)



Recent Astronomy Highlights – continued from page 4

Another Volcano Newly Discovered on Mars

Despite the surface of Mars having long been mapped by spacecraft, it still seems to be able to hold surprises. One such surprise is a recently discovered volcano. That volcano exists in the eastern part of a region known as the Tharsis, near the Martian equator, where there are three other volcanoes, Ascraeus Mons, Pavonis Mons, and Arsia Mons. The newly discovered volcano is not as high as the other three, but is nearly 30,000 feet high, and is far more eroded than the others. Its diameter, approximately 280 miles, does rival the diameters of the other volcanoes. With the volcano having a glacier and many other interesting geological features, it may very well become the site for future Mars missions. More information on the discovery can be found at https://www.space.com/mars-giant-volcano-hiding-plain-sight.

Calendar of Events

NCA Telescope Making, Maintenance, and Modification Workshop (TM3W) (previously the NCA Mirror- or Telescope-making Classes): The Chevy Chase Community Center has reopened and classes have resumed. Classes will be Tuesdays and Fridays, from 6:00-9:00 pm at the Chevy Chase Community Center (intersection of McKinley Street and Connecticut Avenue, N.W.) Please contact instructor Guy Brandenburg at 202-635-1860 (leave message) or at gbrandenburg@yahoo.com if you plan to attend. Info is at guysmathastro.com.

Open house talks and observing at the University of Maryland Observatory in College Park are temporarily suspended. When they resume, they will be on the 5th and 20th of every month at 8:00 pm (Nov.-Apr.) or 9:00 pm (May-Oct.). Updates are posted at www.astro.umd.edu/openhouse.

Next NCA Meeting: 11 May 7:30 p.m. Theresa Kucera (GSFC), A STEREO View of the Sun

The APS Mid-Atlantic Senior Physicists Group: (at the American Center for Physics and on Zoom) April 17th at 1:00 p.m., Dr. Brian Belanger, National Capital Radio & Television Museum (in Bowie, MD), will give a talk entitled "Nicola Tesla". A link to register and attend the meeting via Zoom is https://apsphysics.zoom.us/meeting/register/tZEucO2rpzgjGdAzDDcZiOVP7vex9-i6R8IM

National Capital Astronomers Membership Form

Name: _____ Date: ___/___/___

Address: _____ ZIP Code: _____

Home Phone: ___-___-___ E-mail: _____ (necessary for delivery of Star Dust)

Membership (circle one): Student..... \$ 5; Individual / Family.....\$10; Optional Contribution.....\$__

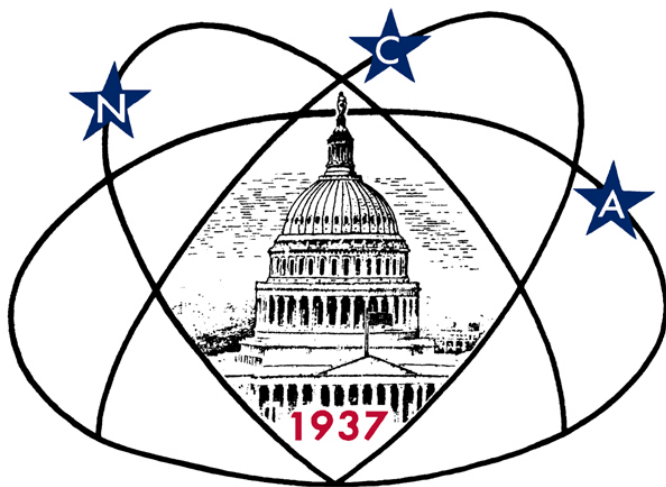
Please indicate which activities interest you:

- Attending monthly scientific lectures on some aspect of astronomy
Making scientific astronomical observations
Observing astronomical objects for personal pleasure at relatively dark sites
Attending large regional star parties
Doing outreach events to educate the public, such as Exploring the Sky
Building or modifying telescopes
Participating in travel/expeditions to view eclipses or occultations
Combating light pollution

Do you have any special skills, such as videography, graphic arts, science education, electronics, machining, etc.?

Are you interested in volunteering for: Telescope making, Exploring the Sky, Star Dust, NCA Officer, etc.?

Please mail this form with check payable to National Capital Astronomers to: Jim Simpson, NCA Treasurer; 3845 Wayson Road, Davidsonville, MD 21035



Celebrating 87 Years of Astronomy



Image Credit – NASA, ESA, CSA, Ivo Labbe (Swinburne), Rachel Bezanson (University of Pittsburgh) and Alyssa Pagan (STScI)

JWST captured an image of the Pandora Cluster and dwarf galaxies behind it. More information is at <https://www.nasa.gov/universe/nasas-webb-uncovers-new-details-in-pandoras-cluster/>.

To join or renew online, visit capitalastronomers.org and look in the right column for the Membership Form and PayPal links.

Next NCA Meeting:
2024 April 13th
7:30 pm
Sue Bassett

To join the meeting via Zoom, use the following link:
<https://umd.zoom.us/j/95154535739?pwd=cERBUE9XM3AvNE40TXYrNUptVETzUT09>

Please download and import the following iCalendar (.ics) files to your calendar system:

https://umd.zoom.us/meeting/tJEscu2trT4tGd1QOonrqcTNP3fs8VY-InJt/ics?icsToken=98tyKuCtrz4uH9eQtxqORowMBY_4LOztiVajacMrTDqDTJCYTfyBrFElepJKZX5

Please note that NCA Zoom meetings are often recorded.

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