

Star Dust

Newsletter of National Capital Astronomers, Inc.

capitalastronomers.org

April 2025

Volume 83, Issue 8

**Celebrating 88 Years
of Astronomy**

Next Meeting

When: Sat. Apr. 12th, 2025

Time: 7:30 pm

Speaker: Dr. Kevin B. Stevenson

Where: In-Person (UMD Obs.) and
Online (Zoom)

See instructions for joining the
meeting via Zoom on Page 9.

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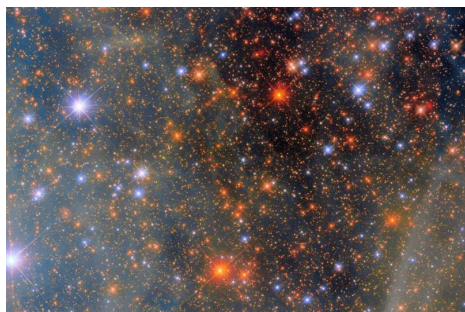


Image Credits – ESA/Hubble & NASA, C. Murray

The Hubble Space Telescope recently captured the image above of a star-forming region in the Small Magellanic Cloud. More information is available at phys.org/news/2025-03-image-hubble-captures-small-magellanic.html.

Strange New Worlds

Dr. Kevin B. Stevenson - Principal Professional Staff, Johns Hopkins University Applied Physics Laboratory

Is there a universal divide between planets with and without atmospheres, based on their incident flux and escape velocities? By studying exoplanets that span the atmospheric cosmic shoreline, we can place constraints on the prevalence of rocky, M-dwarf planetary atmospheres and the mechanisms that drive their escape.

While there are numerous rocky exoplanet observing programs currently underway, we are still waiting for the first definitive detection of an atmosphere. Initial JWST results have been a mixed bag of null results, varying interpretations, and enticing spectral features that could be planetary or stellar in origin. There have also been plenty of lessons learned.

Fortunately, we have only just begun to scratch the surface of rocky exoplanets and can look forward to new breakthroughs as we undertake more precise studies in future cycles.



Biography: Dr. Stevenson enjoys working in the phase space overlapping planetary sciences, astrophysics, and astrobiology. He is the PI of CHAMPs, an interdisciplinary research team whose goal is to understand if M-dwarf planets can support life and how best to characterize them. He is also the co-PI for two large JWST programs that will determine the prevalence of atmospheres around terrestrial planets orbiting nearby M-dwarf stars.

Recent Astronomy Highlights

Discovery of Dwarf Galaxy That Theory Said Shouldn't Exist

Dwarf galaxies are difficult to discover since they can be very small and dim. Nevertheless, many have been discovered around the Milky Way. A recent study has also discovered a number of such galaxies around the Andromeda Galaxy including Andromeda XXXV, currently the smallest known dwarf galaxy. Andromeda XXXV is so small, approximately 20,000 times the mass of the Sun, that astronomers were surprised at its existence since it was believed that its gas should have been dispersed by the hotter and denser conditions of the early Universe. It has also been discovered that Andromeda XXXV continued to have star formation much later than expected. In the dwarf galaxies surrounding the Milky Way, star formation seems to have shut down around ten billion years ago, however the process continued in at least some of Andromeda's dwarf galaxies until approximately six billion years ago. Why this happened is still a mystery. More information can be found at www.space.com/the-universe/scientists-discover-smallest-galaxy-ever-seen-its-like-having-a-perfectly-functional-human-being-thats-the-size-of-a-grain-of-rice.

Larger Organic Molecules on Mars

Simple organic molecules have already been discovered in samples taken on Mars, however until now it was uncertain if molecules with up to twelve atoms of carbon existed there. But an analysis of a rock sample, designated Cumberland, taken by the Curiosity rover in 2013 has shown that long-chain organic molecules such as decane and dodecane exist there. While these organic molecules are often produced in living processes on Earth, they can be produced by non-living processes as well. However this discovery boosts the possibility that even more complex molecules, indicative of life if it existed there, might still be preserved on Mars. More info can be found at phys.org/news/2025-03-molecules-unprecedented-size-mars.html.

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Vera Rubin, Former NCA Member, To Be Honored With a Commemorative Coin



Image Credit – US Mint

Astronomer Vera Rubin, who was a member of the National Capital Astronomers, will be one of five women in 2025 appearing on a US quarter as part of the American Women Quarters program of the United States Mint. Having overcome sexism in the field of Astronomy, Dr. Rubin studied rotational curves of galaxies and discovered some of the early evidence for dark matter. She will be the first US astronomer to receive such an honor.

More information about Dr. Rubin's life and legacy, as well as the American Women Quarters program, can be found at news.cornell.edu/stories/2025/03/rubin-barrier-breaking-astronomer-graces-us-quarter.

(Thank you to Sue Bassett for informing NCA members about this story.)

Schedule of Upcoming NCA Meetings and Speakers

Carl Biagetti

Apr. 12, 2025 -- Kevin Stevenson (JHU/APL) *Strange New Worlds*

May 10, 2025 -- Rob Zellem (GSFC/RST) *The Nancy Grace Roman Space Telescope (exact title tbd)*

June 14, 2025 – Science-Fair Projects and Astro-photos

Sept. 13, 2025 -- Kristin Sotzen (JHU/APL) *The Dragonfly Mission*

Oct. 11, 2025 -- David DeVorkin (NASM) *George R. Carruthers: The Quiet Genius Who Was the First to Send an Astronomical Telescope to the Moon*

Exploring the Sky



2025 Exploring the Sky Sessions

5 Apr	8:00 PM
3 May	9:00 PM
7 Jun	9:00 PM
5 Jul	9:00 PM
2 Aug	8:30 PM
20 Sep	8:00 PM
18 Oct	7:30 PM
15 Nov	7:00 PM

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.

More information can be found at NCA's web site, www.capitalastronomers.org or the Rock Creek Park web site, www.nps.gov/rocr/planyourvisit/expsky.htm. You can also call the Nature Center at (202) 895-6070. For general information on local astronomical events visit www.astronomyindc.org.

The submission deadline for May's Star Dust is April 26th.

Clear Skies

President's Corner

Guy Brandenburg

NCA Elections and Nominations

If we follow the NCA constitution and by-laws, then we are supposed to nominate a slate of officers at our April meeting and then vote on the nominees at our next meeting, in May. Right now, we really, really urgently need a nominee for vice-president – the person whose main duty it is to find speakers for our monthly meetings and to introduce them. Carl Biagetti has been doing a wonderful job, and we have had marvelous speakers, but he indicates that he needs to retire. Benson Simon's four-year term as trustee is coming to an end as well. I'm willing to continue as president, unless someone else wants to do it, and Jim Simpson is willing to run again for Treasurer - Secretary. Brian Tomich has stepped in to fill the shoes of the late Jeff Norman as Assistant Treasurer-Secretary, and will hopefully consent to continue next year as well. Volunteers for our vice-president and trustee positions are needed!

Sidewalk Astronomy Continues

Daytime and nighttime sidewalk astronomy continues in DC, largely impelled by Gael Gomez and Zach Gleiberman. Here is a recent photo of an event at the corner of Mt Pleasant and Irving Streets, NW.



Science Fairs, So Far

So far, NCA members Veronica Castillo, Martinus Alcantara, and I have visited the Prince George's County and Fairfax County Regional science/STEM fairs and found a total of four astronomy-related projects that we liked and awarded prizes to. On April 5, two other groups of NCA members will visit the STEM fairs of Montgomery County and Washington, DC. The winners get their choice of NCA swag, a year's subscription to *Sky & Telescope*, a year's membership in NCA, the opportunity to present their project at our June meeting, and pizza before the meeting if they come in person. The four winners we picked have been very happy with their awards, and will present their projects to us on June 14.

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Sky Watchers

April/May

Mercury will rise higher in the predawn sky until reaching greatest western elongation on the morning of April 21 (see below). Venus will also be in the predawn sky, higher up and more visible. Mars will be visible throughout most of the night, setting well after midnight. Jupiter will be high in the evening sky, setting around midnight. Saturn has joined Mercury and Venus in the morning sky and will appear each morning throughout the period. Despite predictions that it would already have happened, there is still no sign of the expected nova of T CrB.

4/12	Full Moon – 8:24 p.m.
4/21	Mercury will reach greatest western elongation, being 27.4 degree from the Sun in the morning sky.
4/22, 23	The peak of the Lyrids Meteor Shower, which produces about 20 meteors/hour. With the Moon only a few days from its new Moon phase, viewing conditions should be ideal.
5/6,7	The peak of the Eta Aquarids Meteor Shower which produces about 30 meteors/hour in the Northern Hemisphere, with more in the Southern Hemisphere. Unfortunately, a waxing gibbous Moon will lead to less-than-ideal viewing conditions.

Time is in EDT (Eastern Daylight Savings Time)

President's Corner – continued from page 3

Possible End of NCA Telescope Workshop

For many decades, the NCA Telescope-Making, Maintenance and Modification Workshop (TMMMWW) has been meeting, rent-free, at the Chevy Chase Community Center. We have an amazing amount of stuff there, including power and hand tools, lots of optical glass, abrasives, lumber, pieces of metal, hundreds of gallons of paint, measuring devices of all sorts including a 20-foot-long testing tunnel, and storage space for telescope projects that are being worked on. Our room is quite large. It is officially designated a Wood Shop, but in the past third of a century, I only know of a single episode, for a bit less than a year, during Covid, when there has ever been a qualified master carpenter/woodworker giving lessons to anybody.

However, the room has also been used for enameling classes, glass sculpture classes, and rock-band rehearsals, in addition to our twice-a-week telescope making, maintenance and modification workshop. You certainly could call this room a maker space, but so far, we do not own any 3D printers and we have a lot more sawdust to sweep up on many days than you get in a typical private secondary school's 3D design and fabrication studio.

Right now, the NCA telescope-making group is the only one using this space. Several of the telescopes we use for sidewalk astronomy at random locations or Exploring the Sky once a month in Rock Creek Park were made, maintained or modified in this workshop.

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

Supernova Archaeology Study of the Remains of a Long-Dead Star

GRO J1655-40 is a star system containing a black hole approximately seven times the mass of the Sun and a companion star. The black hole is a remnant of a massive star that once shone brightly, but, because of its mass, used up its fusible elements quickly before succumbing to gravity and collapsing. In that collapse, the black hole formed, but a lot of material from the star exploded outward in a supernova, some of that remnant material landing on the smaller, surviving star. Time went by, and the black hole and star slowly spiraled toward each other until the black hole got close enough to begin stripping material off of its companion star, including some of the remnant material from the dead star. Much of that material has gone into an accretion disk which feeds into the black hole, but some is ejected at high speed, emitting X-rays in the process. Spectra of the X-rays were recorded by the Chandra X-ray Observatory in 2005. Recent examination of those records has shown the presence of nearly eighteen elements from the dead star, indicating that it was much richer in those elements than the Sun is. The abundance of those elements seems to indicate that the original star was approximately twenty-five times the mass of the Sun. More information about the study and the methods used in it can be found at chandra.si.edu/photo/2025/j1655/

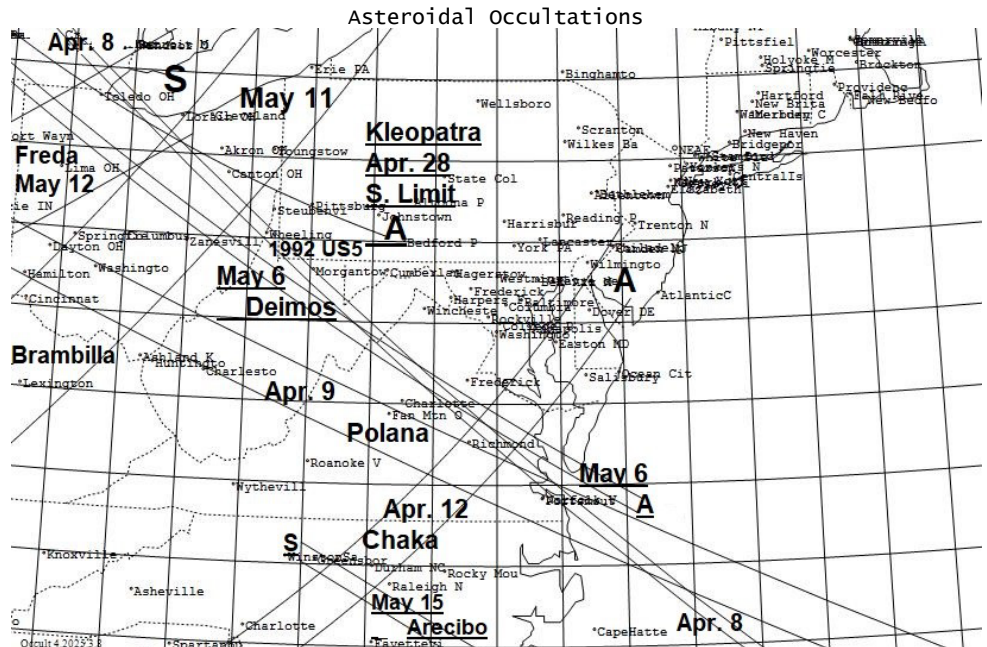
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Occultation Notes

- 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



2025 Date	Day	EDT	Star Name	Mag.	Asteroid # Name	dur. dmag s	Ap. Path
Apr 8	Tue	23:54	SAO 78380	8.3	5449 1992 US5	10 0.5 3	MI-VA
Apr 9	Wed	22:08	4UC56816822	10.7	142 Polana	5 1.8 5	IN-NC
Apr 12	Sat	2:56	TYC78392512	10.0	1245 Chaka	6 2.5 5	NJ-SC
Apr 28	Mon	4:41	4UC38958793	13.0	216 Kleopatra+	0.2 2 14	NJ-MI
May 6	Tue	0:58	SAO 80372 \$	9.1	P4M02 Deimos	5 0.6 8	MI-VA
May 11	Sun	4:51	4U455118184	10.8	640 Brambilla	4 3.3 6	KY-NY
May 12	Mon	5:04	TYC61931380	10.5	1093 Freda	2.3 8 6	ON-IN
May 15	Thu	21:20	4UC #	11.3	4337 Arecibo	8 0.5 9	NC

+: metallic dogbone object, but low altitude will make it hard
 \$: star is TYC 1398-00275-1, spectral type F0, see p. 3 of <https://occultations.org/publications/rasc/2025/nam25P1planetoccs.pdf>
 #: Star is UCAC4 569-040040; binary asteroid but Gaia RUWE poor, 2.0

Lunar Grazing Occultations

2025 Date	Day	EDT	Star	Mag	% alt	CA Dist. & az. from Greenbelt
Apr 30	Wed	22:34	SAO 77411	9.4	15+ 12 13N	27km, az. 219 deg.
May 2	Fri	20:51	76 Gem	5.3	34+ 52 13N	Baltimore & Berlin,MD;Sun -9

Lunar Total Occultations

2025 Date	Day	EDT	Ph Star	Mag	% alt	CA Sp. Notes
Apr 16	wed	0:46	R 1 Scorpii	4.6	91- 16	39S B1 ZC2263, spectroscop.bin.
Apr 16	wed	3:51	R 4 Scorpii	5.6	90- 25	18S A3 ZC 2276
Apr 16	wed	5:02	D pi Scopp	2.9	90- 21	-54N B1 AA 62, ZC 2287
Apr 16	wed	6:19	R = ZC 2287	2.9	90- 14	67N B1 Sun -3, .Az. 219, ZC 2287
May 1	Thu	21:52	D ZC 1035	6.7	24+ 32	65N K3 close double?
May 1	Thu	23:21	D ZC 1042	6.7	24+ 16	58S A2 close double?
May 2	Fri	20:44	D 76 Gem	5.3	34+ 55	27N K5 Sun -9, ZC1169,MD graze
May 2	Fri	20:59	R 76 Gem	5.3	34+ 52	4N K5 Sun-11, ZC 1169
May 3	Sat	22:17	D gamma Cnc	4.7	45+ 45	55S A1 ZC1308,mg2 10,dTime+80s
May 4	Sun	23:54	D 8 Leonis	5.7	56+ 33	47S K1 ZC1418, close double?

More on northeast US occ's page at iota.jhuapl.edu/exped.htm
 David Dunham, dunham@starpower.net

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President's Corner – continued from page 4

Ever since roughly the turn of the century, when my ATM instructor, Jerry Schnall passed away, I have attempted to step into his shoes and those of Bob Bolster, John Dobson, and many others in order to help others to make telescopes. We currently have a couple of 18-year-old interns who are learning how to use a wide variety of power and hand tools to make various things like measuring devices or adjustable viewing chairs. (One of those young folks, Gael Gomez, is working on figuring his second Newtonian, telescope mirror, a 5" f/5, which is quite challenging indeed. He is also an amazing sidewalk astronomer!)

You may have heard that the CCCC and the adjacent DC public library are soon going to be demolished and rebuilt. Last year, the DC city government requested proposals from local construction/architectural groups for a total makeover of the entire trapezoidal area between Northampton, McKinley, and Connecticut. The proposals all needed to include a fairly large number of low- or moderate-income housing units on the upper floors, with the community center and a public library on the lower floors. Other requirements were exterior playground space and some underground parking.

On March 29th, eight different architectural/engineering/construction groups gave public presentations, in the auditorium/multi-purpose room at the CCCC, concerning the plans they have drawn up for this project. You can see a portion of their plans at this DMPED website: dmped.dc.gov/publication/Chevy-chase-Civic-Site-rfp-presentations.

Many of the renderings look quite beautiful, and I agree that we don't have nearly enough affordable housing in DC, so I'm very much in favor of the plan to have moderately-priced apartments built over the community center and library.

I only watched a small part of the 9AM - 5 PM public presentations, but I did look at the architectural drawings on display yesterday at the CCCC, and at the plans released at the DMPED website.

Unfortunately for the cause of amateur telescope making and sidewalk astronomy in DC, **I don't see any of the plans having room for our telescope workshop.** Am I missing something?

One of the exhibitors showed me a partial floor plan for their design. The only thing I could find was a much smaller "maker space" that would probably be shared with other groups. In another proposal, I saw not even that. Currently, our space, for which I am exceedingly grateful to the mayor and city council and DC Department of Parks and Recreation (DPR), is a roughly thousand-square-foot room in the basement. It holds our testing tunnel, some heavy tool cabinets, metal and wood lathes, a milling machine, a vacuum chamber for coating telescope mirrors, a table saw, wood and metal band saws, grinders, lots of useful wood scraps, a large mirror-polishing machine, three different dust collectors, five heavy work tables, countertop materials, numerous cardboard tubes of various sizes and lengths, a dozen or so metal and wooden cabinets and shelves with books, supplies, nuts and bolts, springs, slabs of Teflon and other plastics, adhesives, cans of paint and more. It even has some 240VAC outlets that were put in for the glass moulding class that was held here for

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President's Corner – continued from page 6

a year or two when the city was rebuilding the Guy Mason recreation center.

That's a lot of stuff, most of it donated to us.

I am happy to report that since we are all volunteers, the DPR lets us use the room for free – including electric, water, etc. In return, we give instruction and assistance, for free, to folks who want to build or fix a telescope. We put on astronomy viewing events from time to time atop or near the Center to let folks look at the Sun or various nighttime targets. But it looks like that might not continue for much longer.

When the final design is chosen from those eight proposals, and just before the library and community center are demolished, the TMMMW along with other activities, will probably be given temporary 'swing space' at another DC community center. However, we have a LOT of stuff, as I think I indicated, and I would be surprised if other DC community centers would have sufficient room.

And unless the winning architectural team has designed a large room set aside as a maker space that I didn't see, or unless some other agency or private party feels like giving us room rent-free, we will have no place to return to, and our telescope-making workshop, which has been in existence since World War Two, will cease. We will need to give away or sell many tons of equipment and supplies.

This sort of free instruction in precision optics and in the construction, testing and use of a useful, scientific and enjoyable instrument, namely a home-made telescope, will also cease.

I know this would not be the biggest disaster in the world. But it would be a shame for all those materials, and for our expertise and help, to go to waste. When the actual floor plans for the Chevy Chase Civic Center are released, we can look at them carefully to see if they will have enough open space for us. If not, then we can make comments and get our friends to do so as well.

Et Tu, Smithsonian?



This year's Smithsonian Folk Life Festival has the theme of Youth (and older folks passing on their knowledge). Gael Gomez and I were recruited to be part of this by a Smithsonian staffer who came upon one of Gael's sidewalk astronomy events. On the very day that Gael Gomez and I met with a crowd of Smithsonian folks and others to begin planning our roles in this event (March 29, see above), our current US president decided he needed to attack the Smithsonian for allegedly distorting history. He probably means that he is unhappy that Black, Indigenous, and female voices are being heard and seen for a change. I am willing to bet that he wants to force out Lonnie Bunch as Secretary of the Smithsonian. NCA is not a political organization, but I must condemn this current administration's widespread attacks on science and fairness to all, and I hope that this year's Folk Life Festival will actually happen.

The very tentative plan, so far, is to have a day and/or nighttime astro viewing event right on the center of the Mall on June 21 (the solstice), when the museums stay open late, and also hold other similar events during the week of July 2 - 8, including one daytime discussion panel. Obviously, if other NCA members (or anybody else) wants to bring scopes out for the viewing events, that would be more than welcome.

Recent Astronomy Highlights – continued
from page 4

Dark Energy May Be More Complicated Than Previously Suspected

As part of the Lambda Cold Dark Matter (Λ CDM) model of the Universe, dark energy is thought to be an unknown substance that is causing an increasingly accelerated expansion of the Universe as time goes by. But findings from the Dark Energy Spectroscopic Instrument (DESI) seem to indicate that dark energy's effect on the Universe may currently be weakening, and that expansion was accelerating even more rapidly seven billion years ago. It should be noted that this is a preliminary result. Much more data will need to be taken and examined to either confirm or deny that finding. But if there is confirmation, it would seem to indicate that the Lambda CDM model will have to undergo significant modification. More information on this preliminary discovery is available at phys.org/news/2025-03-dark-energy-rattling-view-universe.html.

Calendar of Events

The NCA Telescope Making, Maintenance, and Modification Workshop (TMMW) is held on Tuesdays & Fridays, from 6:00 to 9:00 PM, in the basement wood shop of the Chevy Chase Community Center. The CCC is located at the intersection of McKinley Street and Connecticut Avenue, NW, a few blocks inside the DC boundary, on the northeast corner of the intersection. There is no cost to attend. At the TMMW, you can make a telescope from scratch, or else get assistance with collimating or modifying a scope you already own. We can also re-aluminize mirrors up to 12.5" in diameter for much less money than you would pay anywhere else. For additional information visit Guy Brandenburg's Website. To contact Guy, call 202-262-4374 or [Email Guy](mailto:Guy@astro.umd.edu).

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.

Mar 27, 2025 -- The APS Senior Physicists Group: Monday, Apr. 27th at 1:00 p.m., Dr Jun Ye, (JILA, NIST and the University of Colorado), will give a talk entitled "Lighting a path for clock and fundamental physics." This meeting will be on Zoom only. The Zoom link to register and attend is apsphysics.zoom.us/meeting/register/yMt3iE0dSuGcHS7G9sEtUw.

May 10, 2025 -- Rob Zelle (GSFC/RST) The Nancy Grace Roman Space Telescope (exact title tbd) – 7:30 p.m. at the University of Maryland Observatory and on Zoom.

National Capital Astronomers

Online Membership Application and Renewal

To submit or renew a membership to the National Capital Astronomers, and pay dues, please visit capitalastronomers.org/. There is a Google form for membership on the upper right. Please fill out the Google form, including your email address, in order to continue receiving issues of Star Dust.

Membership Rates

\$ 15 – 1 year Individual/Family
\$ 35 – 3 years Individual/Family
\$ 5 – 1 year Student
\$200 -- Life Member

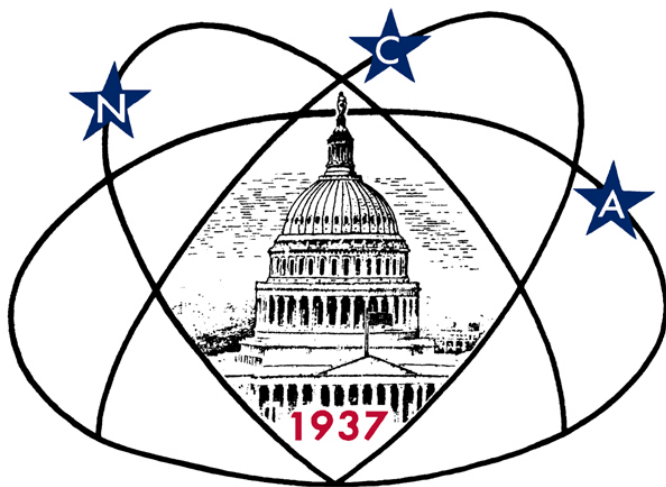
(Please note that membership dues will go up in coming years, so consider joining/renewing with the 3-year option in order to save money.)

If you prefer to pay membership dues by check,

- make check payable to **National Capital Astronomers** then
- mail to: **Jim Simpson, NCA Treasurer; 3845 Wayson Road, Davidsonville, MD 21035.**
- Don't forget to also fill out the [membership Google form](#), even if renewing!

NCA can use your help! Please indicate on the [membership Google form](#) which astronomy activities are of interest to you. In addition, we are also looking for volunteers! We need new officers, help with our website and social media, and help with outreach and science fair events.

Thank you!



Celebrating 88 Years of Astronomy

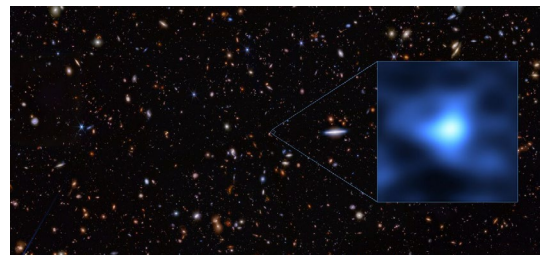


Image Credit - ALMA (ESO/NAOJ/NRAO)/S. Carniani et al./S. Schouws et al/JWST: NASA, ESA, CSA, STScI, Brant Robertson (UC Santa Cruz), Ben Johnson (CfA), Sandro Tacchella (Cambridge), Phill Cargile (CfA)

Oxygen was discovered in the very distant and ancient galaxy, JADES-GS-z14-0. More information about the galaxy is available at phys.org/news/2025-03-oxygen-distant-galaxy.html#google_vignette.

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

Next NCA Meeting:
2025 Apr. 12th
7:30 pm
Dr. Kevin B. Stevenson

- *Virtual attendees:* To join the meeting via Zoom, use the following link:
umd.zoom.us/j/91273752763?pwd=XKZL9V94XIDzwWg7FYDKLbVUQb5YRP.1
- *In-person attendees:* The UMD Astronomy Observatory is at 3255 Metzerott Road, College Park, MD 20740. Directions:
www.astro.umd.edu/openhouse/1visiting/directions.html

Please note that NCA Zoom meetings are often recorded.

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