Star Dust

Newsletter of National Capital Astronomers, Inc.

capitalastronomers.org

September 2025 ***Volume 84, Issue 1***

Celebrating 88 Years of Astronomy

Next Meeting

When: Sat. Sept. 13th, 2025

Time: 7:30 pm

Speakers: Dr. Rob Zellem

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

See instructions for joining the meeting via Zoom on Page 10.

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Image Credits – RubinObs/NOIRLab/SLAC/NSF/DOE/AURA/A. Pizarro D.

The Vera C. Rubin Observatory is up and running, providing its first images to the public on June 23, 2025. More information is available on Page 2 in the Recent Astronomy Highlights.

Annual Membership Dues are Due

Instructions to join NCA or renew your membership, are available at capitalastronomers.org/ (top right corner). Please fill out the electronic form! Dues payment is electronic (preferred!) or by check (see information for doing so on Page 9). Please support NCA by applying for or renewing your membership at this time to continue receiving Star Dust. ***Thank you!***

Exoplanets: Finding Life In The Galaxy

Dr. Rob Zellem - NASA's Goddard Space Flight Center

Join exoplanet astronomer Rob Zellem, of NASA's Goddard Space Flight Center, as he discusses how we find and characterize exoplanets, planets outside of our own Solar System, with the goal of detecting signatures of life. He will also discuss current and near future ground-and space-based missions, such as NASA's Habitable Worlds Observatory, a proposed observatory designed to find life on exoplanets, and a citizen science project called Exoplanet Watch, which features amateur astronomers conducting observations of exoplanets to help use these resources more efficiently and to discover new planets.

Image Credit - Christophe Marcade

Biography: Dr. Rob Zellem is a research astrophysicist at NASA's Goddard Space Flight Center. His research focuses on the characterization of the atmospheres of exoplanets using both the transit and direct imaging methods. Rob is a Deputy Project Scientist for NASA's Nancy Grace Roman Space Telescope and is a member of the Roman Coronagraph Project Science team where he led the development of the science calibration plan. He is the Project Scientist and Lead for

Recent Astronomy Highlights

First Images From The Vera Rubin Observatory Revealed

Part of the Virgo Cluster – Image Credit - NSF–DOE Vera C. Rubin Observatory

On June 23rd, astronomers revealed the first images from the new Vera C. Rubin Observatory. Constucted in the mountains of Chile, the observatory is named after the one of the pioneers in the study of dark matter. Dr. Rubin was also a member of the National Capital Astronomers. The initial mission of the observatory is to image the complete southern sky every few days for ten years in order to provide a time-lapsed view of that sky. This will allow for study of transient phenomena such as supernova and the light from variable stars. The survey will also provide a more complete catalogue of asteroids and other small bodies within the Solar System. The survey has been designated as the Legacy Survey of Space and Time, LSST, taking the intials of the original name of the telescope, the Large Synoptic Survey Telescope. That telescope contains the largest CCD camera ever built. More information about the observatory and its mission can be found at https://rubinobservatory.org/ .

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Biography – continued from page 1

Exoplanet Watch, a citizen science project to observe transiting exoplanets to update their ephemerides to ensure the efficient use of large telescope time. Rob is the Ground-Based Sub-working Group co-lead for Pandora, whereby he is coordinating ground-based observations to support both the operations and scientific interpretation of Pandora data. He is also a co-lead for NASA's Nexus for Exoplanet System Science (NExSS) and a science team member for NASA's CASE contribution to ESA's Ariel mission.

Schedule of Upcoming NCA Meetings and Speakers

Bryan Vandrovec and Carl Biagetti

Sept. 13, 2025 -- Rob Zellem (GSFC/RST) *Exoplanets: Finding Life in the Galaxy*

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

Nov. 8, 2025 -- Michael Kirk (NASA's GSFC)

Dec. 13, 2025 – Kristin Showalter Sotzen (Johns Hopkins APL)

Jan. 10, 2026 -- Christine Hirst Bernhardt (National Earth Science Teachers Association)

Feb. 14, 2026 -- Frank Summers (Space Telescope Science Institute)

President's Corner

Guy Brandenburg

Annual board meeting

Our annual NCA board meeting on August 23, with the new officers and even some brand-new NCA members, was very productive and well-attended. Among other things, we looked at the budget, which is very healthy (about $15K in the bank), our membership (over 140), and discussed most of the issues I write about here.

Loaner scopes

The first telescope officially lent out by NCA, a manually-aimed 6" Hardin Dob that was donated to us last year, was returned in good shape a few days ago, and the $100 deposit was returned via Paypal Friends and Family. The cash transaction was nearly effortless and cost us exactly zero. The borrower was very happy with the whole process. Despite getting clouded out for the Perseids after a long drive out to a dark sky site in a park, she was delighted to later use the scope from her east-facing balcony apartment in Columbia Heights (DC) and to stay up late enough to see Jupiter. The Orion Sirius mount that was lent out shortly afterwards to another member is still being used. The recipient is quite happy with it. It is due back shortly after Labor Day.

Looking up Library Telescopes (LT) a website that was suggested at the board meeting, I was disappointed to find that their

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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 October's Star Dust is September 27th.

Clear Skies

President's Corner – continued from page 2

currently recommended model, the Zhumell 114 – a table-top 114 mm diameter alt-az Newtonian with no electronics but a bunch of fool-proof and effective features - is all sold out and is not being produced any more. The previous official LT, the Orion Starblast, stopped being produced when Orion went out of business not long ago. Zhumell no longer makes anything similar to an LT as far as I can tell, and I cannot find any Library Telescopes at any library within an hour's drive of central DC, though they do exist on the second-hand market.

However, Celestron is still producing a tabletop telescope, the Celestron 22480 Explorer 114mm, which even has a StarSense object locator built in. Amazon lists it at $273. There is also a Sky-Watcher Heritage 130mm Tabletop Dobsonian, not as idiot-proof as the official LTs, with no electronics, for $269.

Following the suggestions of several folks at the recent board meeting, I just now made an online order for an Apache equipment case from Harbor Freight in order to hold the eyepieces and finder scope for the 6" Hardin loaner telescope mentioned earlier: 2800 Weatherproof Protective Case, Medium, Orange for a cost of $41 including shipping and taxes. I have access to a foam cutter and will cut holes to fit the finder and eyepieces. We should also purchase some of those white, translucent, plastic, barrel-type screw-on eyepieces cases for the eyepieces.

Local brick-and-mortar astronomy stores

I somehow had the impression that Company Seven (Company Seven | Astro-Optics Index Page) was the only remaining brick-and-mortar astronomy store in the entire USA, and said so, but I did a little research and discovered that this is not the case. Of the 46 listings at the following site (Telescope Repair & Retail Stores | 2024 List | GO ASTRONOMY) I found that some were out of business, some were simply mail-order retailers, and some were just precision manufacturing or repair facilities. I checked on Google Maps Street View to see if the other ones had actual retail signs out front and had regular store hours, and found at least seven such places. (I may have missed a few.) So, there are less than a dozen actual retail astronomy stores (but many more on-line retailers both large and small) for a third of a billion potential customers!

Company Seven is the only brick-and-mortar retail astronomy store with a showroom that I found within a 4-hour drive of DC. The closest other ones I found are Insight Astronomy in Bridgeport, WV ((9) Facebook); Adorama on West 18th Street in New York CIty (Adorama NYC Store - 42 west 18th street, New York, NY, 10011 | Adorama); High Point Scientific (Telescopes | Eyepieces & Telescope Accessories | High Point Scientific) in far northern New Jersey; and the Astronomy Shoppe in Punta Gorda, FL and Plaistow, NH (Astronomy Shoppe – New England's and Florida 's Telescope and Birding Optics store).

Running a retail business is hard work, and the owner has to sell a lot of stuff each week in order for the retail/wholesale markup to enable them to pay for rent, utilities, and labor. When a customer wanders into such a store, or calls by phone, and occupies a lot of the sales people's time and gets their advice, but then goes and purchases the very same item online instead of from the actual brick-and-mortar business, that is a nasty,

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Sky Watchers

September/October

Mercury transits to the evening sky in mid-September, and will remain very low following sunset, becoming viewable perhaps in October. Venus will be high and bright in the predawn sky. Mars will be in the evening sky, dropping lower each night. Jupiter will rise after midnight and be high in the predawn sky. Saturn will be visible nearly all night, reaching opposition on September 21st (see below). Despite predictions that it would already have happened, there is still no sign of the expected nova of T CrB.

9/11	Saturn at opposition, closest to Earth and viewable all night long.
9/21	Autumnal Equinox at 2:20 p.m.
10/6	Full Moon – 11:47 p.m.

Time is in EDT (Eastern Daylight Savings Time)

President's Corner – continued from page 3

figurative, and financial kick in the privates. Please don't do it. Do patronize our only local astronomy store! If you ask them for advice on something, purchase it from them!

News from the Telescope Making, Maintenance, and Modification Workshop (TMMMW)

A parent of a former student of mine at Deal MS here in NW DC donated to us a 53-inch diameter table top that she had no use for but was unable to sell. I had it cut up via water jet by BelPre Glass into exactly 14 smaller disks in more usable sizes for telescope making: diameters of 8, 10, 12.5, 14, and 16 inches. It ended up costing us almost exactly one dollar per square inch of disk. The TMMMW fund and myself are paying for that.

The very existence of the workshop itself is owed to the DC Department of Parks and Recreation letting us use the space for free, complete with all utilities, which is extremely generous of them. Thank you, DC government! The space has in the past also been used for rock band and drum rehearsals, enameling, glass-forming, and a woodshop with an actual instructor. Right now, the TMMMW is the only occupant. If we had to pay rent, we could not do so. We would need to get rid of a few metric tonnes of stuff: an aluminization chamber, a milling machine, the four wood and metal lathes, the stores of glass blanks, abrasives, and miscellaneous optical treasurers, the saws, the paints, the various pieces of wood, plastic and metal, and all the wide variety of measurement devices.

You may recall that the DC government has requested and received proposals for redeveloping the piece of land that currently hosts the Chevy Chase Community Center and the adjacent Chevy Chase Public Library. (We are in the basement of the CCCC.) The city required that the plans include several hundred units of subsidized housing of one sort or another. I myself have no problem with such

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Star Dust is published ten times yearly September through June, by the National Capital Astronomers, Inc. (NCA).

ISSN: 0898-7548

Editor: Todd Supple

Editorial Advisors:

- James Kaiser
- Brian Tomich
- Elizabeth Warner
- Marjorie Weissberg

Electronic Distributor: Elizabeth Warner

Recent Astronomy Highlights – continued from page 2

The Mechanism of Sunspot Longevity Discovered

Even though sunspots have been observed for centuries, their longevity, days and sometimes even months, despite the incredible turbulence of the solar surface, has remained a mystery until now. Studying polarized light from the region of sunspots, astronomers have discovered that this longevity is due to a balance between the Sun's magnetic fields and the pressure of the solar plasma. This state of balance is known as magnetohydrostatic equilibrium. Astronomers believe that understanding this equilibrium will allow for better predictions of such solar phenomena as coronal mass ejections. More information is at dailygalaxy.com/2025/07/a-centuries-old-solar-riddle-uncovered/.

Gases in 3I/ATLAS's Coma May Indicate A Unique Formation Environment

JWST observations of the third interstellar visitor to our Solar System, show a ratio of carbon dioxide to water of 8 to 1, a higher ratio than has been seen for any previous comet. The ratio may be due to the comet having formed beyond the CO_2 ice line of its original stellar system, or perhaps it was born in a system with extremely high levels of ultraviolet radiation. But the high ratio might simply be because the CO_2 is being released faster in the colder outer Solar System while more water will be released as the comet gets closer to the Sun. More information is at phys.org/news/2025-09-jwst-reveals-3iatlas-coma-largely.html.

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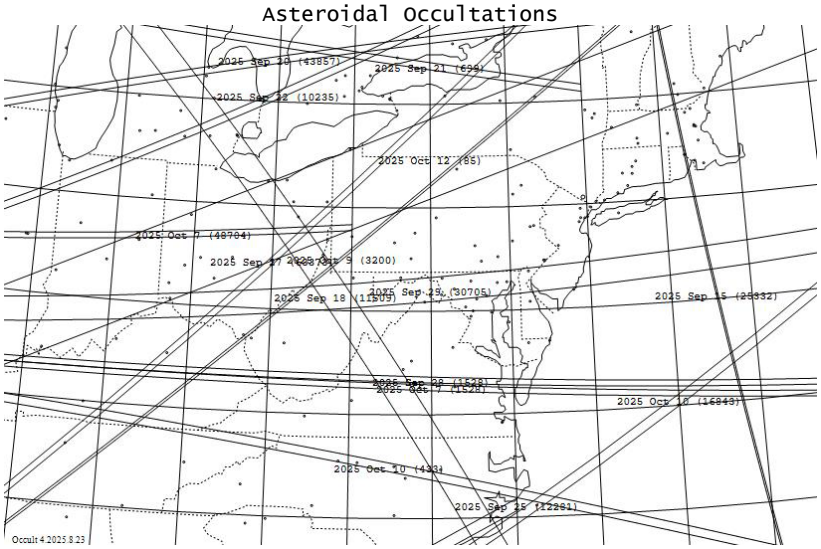
Occultation Notes

- 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



2025 Date	EDT	Star Name	Mag.	RUWE <1.4	Type	#	Asteroid Name	dur. dmag	s	DC-Dst Alt	km
Sep 14	22:09	TYC16100774	11.5	1.15	Sp	25332	1999 KK6	5.3	0.3	67	537
Sep 18	2:42	4UC52507091	12.9	0.90	Tr	11509	Thersiloch	4.9	7.9	49	219
Sep 20	4:30	TYC22461584	8.9	1.10		43857	Tanijinzan	7.6	1.4	36	591
Sep 21	5:44	4UC53539262	10.1	1.00	Sp	699	Hela	6.7	0.6	50	523
Sep 22	1:58	4UC49601150	11.4	1.20	Sp	10235	1998 QR37	5.6	1.1	60	617
Sep 25	0:21	4U334208279	12.1	1.20	Sp	12281	Chaumont	5.6	2.8	10	393
Sep 26	23:56	HIP 106464	7.7	3.45		63373	2001 HS35	11	2.4	41	377
Sep 28	4:48	TYC07421123	10.0	1.05		1528	Conrada	6.9	0.8	54	139
Sep 29	2:46	4UC48902104	12.6	1.00	Tr	30705	Idaios	4.7	2.8	58	64
Oct 7	3:47	4UC52223101	10.3	2.15		1528	Conrada	6.4	1.0	48	156
Oct 7	6:32	TYC46850055	9.2	0.95		48704	1996 JR2	9.8	0.7	13	208
Oct 8	23:06	4UC66719258	12.4	1.00	PHA	3200	Phaethon	5.6	0.3	40	275
Oct 9	23:07	TYC28270623	10.6	1.85	NEA	433	Eros	1.0	3.1	61	357
Oct 10	1:00	TYC06520769	9.3	1.00		16843	1997 XX3	9.2	1.5	50	402
Oct 12	4:39	TYC06140212	10.7	1.05		85	Io	0.5	15	36	346

With this new format, the new columns need some explanation:
RUWE is the ESA-Gaia Re-normalized Unit Weight Error; if greater than 1.3, the actual path may be even 50km from the prediction.
Type: blank, Main Belt Ast.; NEA = Near-Earth Ast.; PHA = Potentially Hazardous Ast.; Tr = Jupiter Trojan; Sp = special Main Belt – see https://occultations.org/publications/rasc/2024/nam24MBspecialoccs.pdf
Last two are for DC: Alt. of the star and path distance in km from DC.
Map dates are UT, so for UT, add 1 to table date if EDT is 20 or more.

Lunar Total Occultations

2025 Date	Day	EDT	Ph	Star	Mag	%	alt	CA	Sp.	Notes
Sep 14	Sun	1:18	R	ZC 773	7.0	52-	23	61S	F8	mag2 9 dT +259s,CA 80S
Sep 14	Sun	6:08	R	ZC 797	6.4	50-	76	12S	B9	Sun -9, spec. binary
Sep 30	Tue	22:04	D	ZC 2848	5.6	60+	18	74N	K1	mag2 9 sep 8" dTime +4s
Oct 4	Sat	2:22	D	42 Aquarii	5.3	88+	16	50S	K1	ZC 3268
Oct 9	Thu	0:30	R	mu Arietis	5.7	94-	56	41N	A0	AA 311,ZC 399,dT -0.1s
Oct 10	Fri	0:12	R	Electra	3.7	87-	44	32S	B6	ZC 537, spect. binary
Oct 10	Fri	0:30	R	Celaeno	5.5	87-	48	72S	B7	ZC 536 = 16 Tauri
Oct 10	Fri	0:48	R	Taygeta	4.3	86-	51	83N	B6	ZC 539, close double
Oct 10	Fri	0:58	R	Maia	3.9	86-	53	66S	B8	ZC 541, close double??
Oct 10	Fri	1:10	R	Asterope	5.8	86-	56	80N	B8	ZC 542,mg2 6.4,dT +217s
Oct 11	Sat	23:02	R	ZC 885	5.6	67-	11	83N	G7	Az. 63,mg2 12,dTime-13s
Oct 13	Mon	6:59	R	47 Gem	5.8	53-	78	84N	A4	Sun -4, ZC 1088

David Dunham; More is on the northeast US occultations pages at https://groups.io/g/OccultNEUS and http://iota.jhuapl.edu/exped.htm.

We have completed our move from Maryland to Arizona, so I hope someone else will do the main work for occultations in the region; I'm reaching out to other occ'n observers in the region about this, and I'll help the transition, especially for the lunar events. David Dunham, dunham@starpower.net

2025-2026 Officers

President:
Guy Brandenburg
gfbrandenburg@yahoo.com
202-635-1860 (leave message)

Vice-President:
Bryan Vandrovec
bvandrovec@gmail.com
301-247-7452

Secretary-Treasurer:
Jim Simpson
simpsonj@verizon.net
240-232-2820

Asst. Secretary-Treasurer:
Brian Tomich
brian.tomich@gmail.com
(214) 536-9080

Trustees:
- Michael Brabanski (2026)
- Jeff Guerber (2027)
- Chong Wang (2028)
- Zachary Gleiberman (2029)

Appointed Officers and Committee Heads:

Exploring the Sky
Jay Miller
jhmiller@me.com

Telescope Making
Guy Brandenburg
gfbrandenburg@yahoo.com
202-635-1860 (leave message)

Star Dust Editor
Todd Supple
NCAStardust@gmail.com
240-687-8193

NCA Webmaster
Elizabeth Warner
warnerem1303@gmail.com
301-405-6555

Science Fair Coordinator
Milt Roney

Social Media
Facebook: NatCapAstro

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housing, but there is considerable neighborhood opposition to all of those plans. What concerned me was that the proposals submitted all seemed to shrink both the library and community center, and none of them seemed to have room for a workshop like what we have now. I have no idea what the future holds for this long-running workshop (ever since WW2!) but I have been assured of 'swing space' at a nearby DC community center. If this workshop is to continue teaching DIY skills of many types (not just telescope-making!) then we might need to find a new home in a different center. Or else we will need to go out of business and sell off a whole lot of equipment and supplies.

Dark Skies
The DC chapter of Dark Skies International (DSI-DC) continues to be in communication with National Links Trust about after-hours lighting at the Rock Creek Golf Course, which we think should all be turned off except for motion-sensitive security lights. (RCNPGC is less than a mile from our Exploring the Sky site, and is being redeveloped, despite considerable public opposition to mass tree cutting and new lighting.) Lots of trees got removed from the course over the past year (along with a whole lot of invasive vines that covered a large fraction of the woods).

NCA is a contributing member of DSI, as am I personally, so I will help represent our joint interests at the DC State Fair on September 6, 2025 from 11 am to 4 pm at Bryant Street NE, a large plaza just west of the Rhode Island metro station.

Sidewalk Astronomy, NCA ID vests
The blue NCA lanyards and vests have arrived and they look good and are quite functional.

Sidewalk Astronomy session with the new NCA vests shown on the right

We tried them out for the first time on Wednesday, August 27 at the usual location at the corner of Mt. Pleasant Street and Irving Street (above). We had two 8" Dobsonians built and operated by Gael Gomez (silver tube, center) and Zach Gleiberman (black tube, in the back), respectively. They were able to find and show all sorts of targets to very happy passers-by who kept thanking us profusely and repeatedly for being there and letting them see stuff with their own eyes. I myself brought a SeeStar (not visible), which is a totally different experience, along with observing chairs and the NCA artwork and signs. (The SeeStar did quite well on the Dumbbell Nebula – see below.)

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President's Corner – continued from page 6

We will also use the vests and lanyards at all future NCA public observing vents – Exploring the Sky in Rock Creek Park and the day-time public solar observing events at Great Falls / C&O Canal National Park, as well as at the National Astronomy Festival on the Mall on September 20. I have given a vest to each NCA volunteer who has come to such events; they should take care of them and bring them to future events.

If you've never done any 'outreach' or 'sidewalk astronomy' event, you are missing out. Especially in an urban area, where most folks think you can't see anything in the sky, and have never looked through a telescope, people are so happy to see anything! That is, if you know how to find anything up there! (The app called AstroHopper helps a lot with this and costs nothing!). Doing sessions like this – once you get it all working – gives you an opportunity to do something that is unquestionably a positively helpful thing for the public, and also to be thanked effusively for doing so! Quite a mood-improver!

More on the lending library

The borrower (who admits she is very much a novice) told me she was very happy with the whole experience (her enjoyment was obvious!) and would definitely recommend it to others. If you think about it, being able to use a scope for a while, for some special occasion, and not having to then store it somewhere for several months until the next time, is a real convenience for anybody interested in looking at the stars for nearly the first time but is no expert and doesn't want more stuff in their apartment.

NOVAC, our neighboring astronomy club (one of the two largest ones in the nation) has a loaner equipment program with the slogan "Try it before you Buy It". They have quite a long list of items that members can sign up for. (I myself am now fifth in line to borrow a ZWO color astro camera). For the most expensive items, such as a beautiful Williams Optics GT71 triplet apochromatic refractor that is perfect for astrophotography, in addition to the substantial but refundable deposit, one must also be an *ACTIVE* volunteer at public NOVAC events.

There are no purely manual Dobsonians in the NOVAC lending library. All the NOVAC Dobs had digital setting circles (for object finding) and some even had full GOTO systems with motors.

Bring your own scopes to UMd Observatory to observe after the meeting

If you own a telescope, whether you know how to use it or not, you are encouraged to bring it to our monthly meetings this fall on September 13, October 11, and November 8. If you need help, some NCA member is likely to be able to help you figure it out. There are six concrete pads, with electricity, on which you can set up your scope if the weather cooperates.

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President's Corner – continued from page 7

Attacks on Science to Benefit Billionaires

NCA is not a political organization, but we should not be quiet when this federal administration is cutting out all sorts of real science, including NASA science, and instead giving billions on tax cuts to the wealthiest. It is also scary when a single person – whose judgement is extremely erratic and changeable – can decide whether our GPS system and military work at all and whether the US can send any devices into space. (See www.military.com/daily-news/2024/11/15/pentagon-silent-elon-musk-and-starlink-risks-military-use-expands.html.)

I also note that sending humans to Mars or the Moon means sending their urine and feces and trash up there as well, messing it up forever. Robots, drones and rovers get better every year, so let's send them instead. The idea of terraforming Mars, when we have a perfectly good terrestrial planet under our feet, and which needs protection from exploitation, is ludicrous.

Astrophotos

NCA's Vice President, Bryan Vandrovec has generously provided the images shown below, as well as details of how they were processed. Bryan would be happy to answer any questions about the gear or techniques used to capture the images. His contact information is on Page 6. Thanks, Bryan.

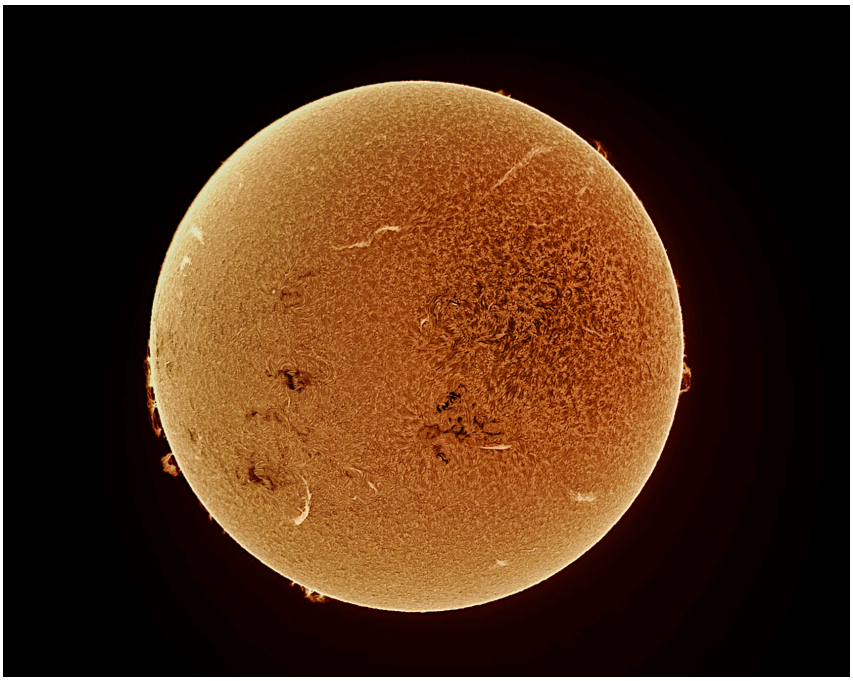

Image 1 (Left) - ***C/2023 A3 (Tsuchinshan-ATLAS)***

- Charles Town, WV
- November 2, 2024
- William Optics Mini SpaceCat 51mm, ZWO AM5N, Sony A7R IV w/ Optolong L-Pro Filter
- Total integration time: 30 min (60 x 30 sec RGB)
- Processing in Siril and Photoshop

Image 2 (Right) - ***Solar Chromosphere***

- Washington, DC
- July 5, 2025
- Lunt 50 mm Hydrogen-Alpha Solar Telescope (double stack), Sky-Watcher HelioFind, Player One Apollo 428M MAX
- Stacked Image (best 200 of 600 x 10 msec mono)
- Captured live during NCA's outreach event at the Smithsonian Folk-Life Festival with FireCapture v2.7, stacked with AutoStakkert!4, and processed with ImPPG and Photoshop

Recent Astronomy Highlights – continued from page 4

Organic Molecules Unexpectedly Found In the Bug Nebula

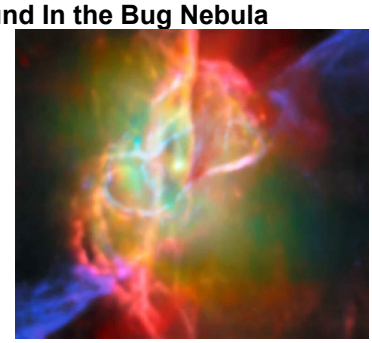

Image Credit - ESA/Webb, NASA & CSA, M. Matsuura, ALMA (ESO/NAOJ/NRAO), N. Hirano, M. Zamani (ESA/Webb)

Polycyclic aromatic hydrocarbons (PAHs), have been found in the Bug Nebula, a place astronomers did not expect to find them due to the violent environment in the region. The finding indicates that such organic molecules may be more common in the Universe than previously thought. More information is available at https://studyfinds.org/james-webb-telescope-molecules-bug-nebula/.

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 CCCC 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.

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.

The APS Senior Physicists Group: Wednesday, Sept. 17th at **2:00 p.m**., Dr. Duncan Buell, (University of South Carolina), will give a talk entitled **Cryptography: Then (until 1970), Now, and In The Future**. The talk is currently Zoom only. The Zoom link to register for the talk and attend is https://apsphysics.zoom.us/meeting/register/jLBuXSkVQ7q8TSYEefM-MA#/registration.

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

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

$ 20 – 1 year Individual/Family
$ 45 – 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 - NSF–DOE Vera C. Rubin Observatory

This image of the Triffid Nebula and the Lagoon Nebula was part of the collection of first images released from the Vera C. Rubin Observatory. More information and a larger image are available at https://rubinobservatory.org/gallery/collections/main-gallery/n4kvj0cemd5pbdqgtjdgp2jg2t.

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 Sept. 13th
7:30 pm
Dr. Rob Zellem

- *Virtual attendees:* To join the meeting via Zoom, use the following link:

umd.zoom.us/j/95619565617?pwd=uqwxzZ39zgVfgOypmcp8cy6xFaCcRb.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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