Roanoke Valley Astronomical Society

Amateur Astronomy News and Views
In Southwestern Virginia

Volume 42—Number 6 **June 2025**

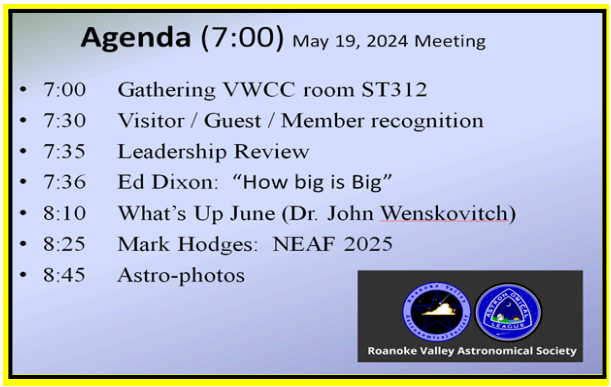
RVAS May Meeting Notes

How Big is Big?

By **Erin Elliott, Secretary**

You can view this month's Zoom recording by clicking this link. The passcode to view the video is: ***2H?n=pU**

After wrapping up the Celestial Café, the meeting began at 7:30pm with an introduction from RVAS President, **Michael Good**. He recognized visiting members and guests to the May meeting before going over the agenda.



*May Meeting Agenda – **Michael Good Slide***

Attendance: There were 24 members in attendance. 13 individuals were in person and 11 attended virtually.

Program | 00:09:07: We thank RVAS Member, Ed Dixon for the presentation. He grew up in SWVA and attended Clinch Valley College (which is now UVA Wise). Even as a child he was active in rockets, electronics and music. He later moved to Charlottesville to attend UVA. He received at BSEE, Masters in Math and a PhD in Math C/S between the years 1972-1974. He worked in Aerospace for some decades, which included rocket science for TRW.

Ed Dixon slide

People are good at understanding size when we can touch or feel the things in question. Adults are bigger than infants. Cars are bigger than a breadbox. Elephants are bigger than dogs. When much larger differences are involved, orders of magnitude, it becomes much hard to comprehend. Its hard to relate to a string of zeros.

We all live on planet Earth, a round rock about 8000 miles wide. At the surface, it tends to look flat. However looking into the skies at night, it's clear that things are actually round. Even then, it took centuries for us to begin to understand the true nature of what's up there.

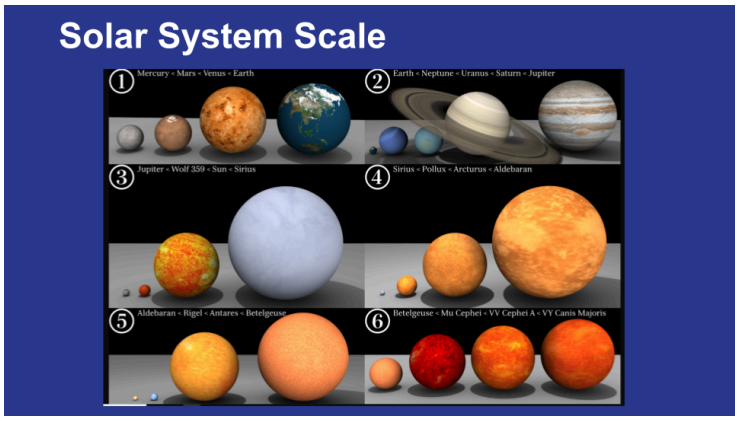
Consider the Earth as the size of a basketball. Place a standard USPS Forever stamp, which is about 1 inch square, on it.

The entire state of Virginia would fit well inside the flag portion. Most of us live in Roanoke county, which is about 250 square miles in size. Roanoke county is about the size of one star from the flag portion.

If we hold the basketball in our hands, the Sun would be about the size of Lane Stadium and be located about 2 miles away. The Moon would be the size of a baseball and be about 25 feet easy. Jupiter would be the size of a box truck and would be in West Salem. Pluto would be the size of a baseball and be 65 miles away.

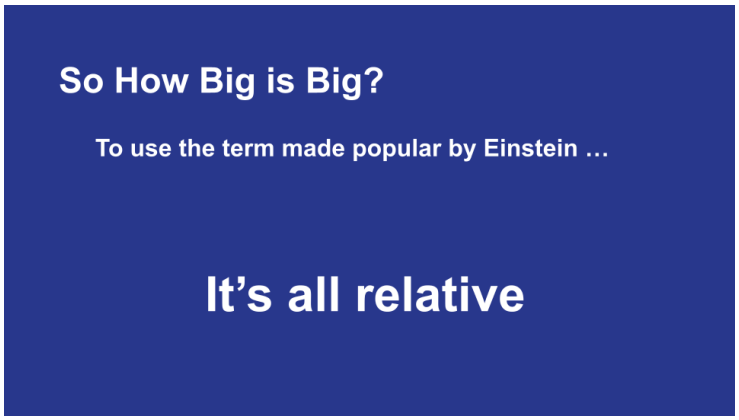
A basketball has a dimpled surface, for increased grip. However, even those tiny dimples are deeper than Mount Everest at that scale. The Earth is about 70% covered by water. However if you put all the water in one place, it would be smaller than an egg on the basketball scale.

We think of our star, the Sun at big. However on an astronomical scale, its fairly small compared to many other stars.



Our galaxy, the Milky Way, is about 100,000 light years in size. If you scale it down to fit on a kitchen table, Earth would be about a foot or so from the center. The Voyager series, launched in 1977, is our furthest reach into outer space. Today it is about 15.6 billion miles away. However on the kitchen table scale, that is less than the width of two human hairs.

The Universe is estimated to be about 96 billion light years across. On the kitchen table scale that would be about DC to Atlanta. Current estimates are for about two trillion galaxies and 10 to the 24 power stars. More stars than the gains of sand on earth.



What's Up? | 00:55:35: John Wenskovitch gave his "What's Up?" program on what the skies of June have in store for us. John's "What's Up? Highlights" in this issue provide a summary of the program. You can watch a recording of his program by clicking the link at the beginning of the newsletter and following the timestamp listed for this segment.

John highlighted two of the Astronomical League Programs this month.

1. Analemma Observing Program. You can find more information about this program by following this link.
2. Space Weather Observing Program. You can find more information about this program by following this link.

*NEAF 2025 – **Mark Hodges Photo***

Northeast Astronomy Forum | 01:16:04: Mark Hodges shared his experience attending NEAF 2025 in Suffern, New York. It's a great chance to see what vendors are selling for astronomical equipment. Check this section of the recording for highlighted equipment and vendors from the event.

*Zoom Screenshot – **Mark Hodges Photo***

Astrophotography 1:20:29: We thank **Stephen Boyd, Ed Dixon, Michael Good, Ben Hartman, Mark Hodges, Dave Thomas,** and **Noah Winslow** for providing their work this month. We had a variety of images focusing on near and deep sky objects.

To provide each image with the focus it deserves, we are sharing the submissions in a separate article in this newsletter. Do not miss checking out the rest of these images.

You can also visit our RVAS Facebook Group to see photos posted throughout the month.

Next month: We look forward to Dr. Brian Gentry as our speaker at the June 16th meeting. He will give a presentation called *Doing Wall Time: Voids and Finite Infinities in a Lumpy Universe.*

The meeting was adjourned at 8:45pm.

What's Up? Highlights
June 1 to 30, 2025

This Month:

Within the solar system, Mars will be the dominant sight in the evening sky throughout the month of June, as we begin the month with losing Jupiter an hour after sunset and end the month with it appearing in the morning sky after solar conjunction on the 24th. Mercury also spends the second half of the month in the evening sky, peaking at 17° above the horizon at sunset on the 27th. Venus and Saturn are the notable planets in the morning sky, with Saturn rising at 12:51am by the end of the month and Venus always above the horizon by 4am. The summer constellations and the center of the Milky Way are also visible throughout the night, giving us the opportunity to explore the nebulae, clusters, and dense star fields in Scorpius, Sagittarius, and Scutum. The June Boötids (also peaking on the 27th) are the sole meteor shower for the month – typically a very minor shower that occasionally provides a 50+ meteors/hour outburst, as seen with the discovery of the shower in 1916 and most recently in 2004. During the solstice on the 20th, Roanoke will have 14 hours and (almost) 47 minutes of daylight.

Celestial Events:

- June 7: Sunset pairing of Jupiter and Mercury
- June 16: Views of Titan's shadow on Saturn, starting at around 4:30am
- June 17: Mars/Regulus conjunction
- June 19: Try to use the Moon and Saturn to find Neptune
- June 23: Try to use the Moon and M45 to find Uranus
- June 26: Sunset arc of Mercury, the 3.6% Moon, Castor, and Pollux
- June 27: Peak of the June Boötid meteor shower; low probability of an outburst

Sunset and Twilight:

- Sunset ranges from 8:34pm (1st) to 8:45pm (30th); latest sunset on the 28th at 8:46pm
- Evening twilight ends from 10:24pm (1st) to 10:36pm (30th); latest on the 28th at 10:37pm

Lunar Phases and Apsides:

- First Quarter: June 2, 11:41pm
- Apogee: June 7, 6:43am (251,999 miles)
- Full Moon: June 11, 3:46am
- Last Quarter: June 18, 3:20pm
- Perigee: June 23, 12:40am (225,670 miles)
- New Moon: June 25, 6:33am

Welcome Mat

The following new members who have joined since the last meeting:

The RVAS welcomes **Kevin R. Vaught**, of Roanoke, as a new member to our club. Kevin got his first telescope in 1970, and fell in love with the sky. He looks forward to talking with folks about astronomy. He owns an Astro-Tech AT102ED refractor (see his RVAS Facebook video), a SkyWatcher EQ-AL55, and a Pro mount. Kevin joined on May 1, 2025. Welcome, Kevin!

The RVAS welcomes **Shelley R. Wardlow**, of Buchanan, as a new member to our club. Shelley explains she has always had an interest in astronomy. She moved to Virginia from California and is looking forward to meeting other folks interested in astronomy. She took a semester of astronomy and enjoyed it. Shelley has a Hexeum Telescope with Bluetooth to take pictures with her phone. Shelley also joined on May 1, 2025. Welcome Shelley!

The Roanoke Valley Astronomical Society is a membership organization of amateur astronomers dedicated to the pursuit of observational and photographic astronomical activities. **Meetings are held at 7:30 p.m. on the third Monday of each month. We meet at the VWCC STEM building ST312. Directions are below. Meetings are open to the public.** Observing sessions may be held, weather and sky conditions permitting, at a dark-sky site. For information regarding joining RVAS, including annual dues, click here. Articles, quotes, etc. published in the newsletter do not necessarily reflect the views of the RVAS or its editor.

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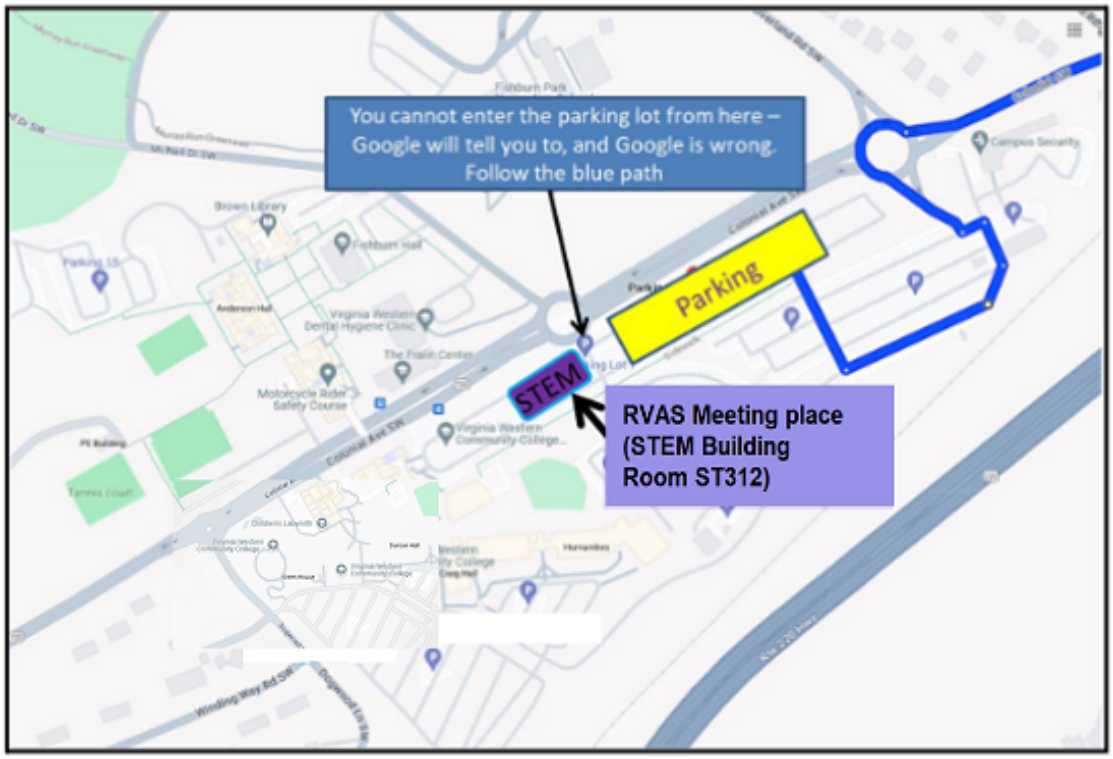
William Krause, Vice President (vicepresident@rvasclub.org)
Erin Elliott, Secretary (secretary@rvasclub.org)
Michael Good, Treasurer (acting) (treasurer@rvasclub.org)
Nancy Vogelaar, Officer at Large #1 (officeratlarge1@rvasclub.org)
Caleb White, Officer at Large #2 (officeratlarge2@rvasclub.org)
Michael Hutkin, Past President (pastpresident@rvasclub.org)
Ed Dixon, Newsletter Editor (editor@rvasclub.org)
Erin Elliott, Webmaster (webmaster@rvasclub.org)

Directions to RVAS Meeting Location

Virginia Western Community College STEM Building, Room ST312
3094 Colonial Ave SW, Roanoke, VA 24015

VWCC is located in the southwestern area of the City of Roanoke. The STEM Building is accessed via the roundabout at Overland Drive and Colonial Avenue, near Campus Security at the top right of the map. The STEM Building is at the opposite end of the Colonial parking lot from Campus Security. Follow the darker blue path from the roundabout and park anywhere in the lot.



Note: Google provides incorrect guidance to access the parking lot from the roundabout at McNeill Drive. That roundabout **<u>does not</u>** provide an entrance to the parking lot.

Bill Jones, an RVAS member, has some astro gear for sale. This can be seen on his Facebook post from May 20,. 2025.

- Meade 10" LX 50 Schmidt-Cassegrain telescope with 10" Orion solar filter and 10" dew zapper that works ,tools and controls. No drive. $700
- Meade 2" ultra wide angle 8.8mm multi-coated eyepiece $95.
- 2" Orion optiluxe 50mm fully coated $ 75.
- Orion 2" star diagonal $95.
- 2".celestron reducer corrector f/6.3 5 $50
- Celestron rich field adapter $40.

Contact Bill Jones for more info about the details of these and other items.

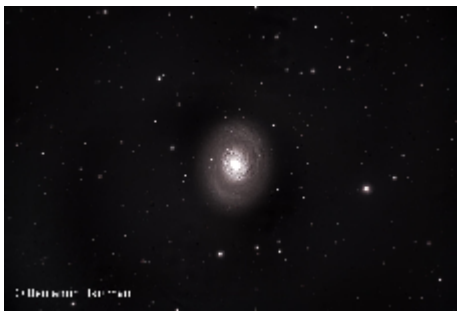
May 2025

Ctrl- Click on the picture see the source file and additional information

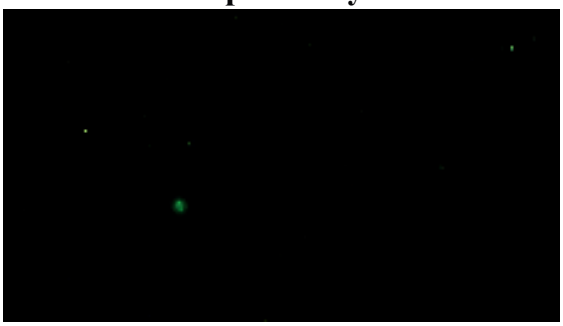
David Thomas

Noah Winslow

Ben Hartman



Stephen Boyd



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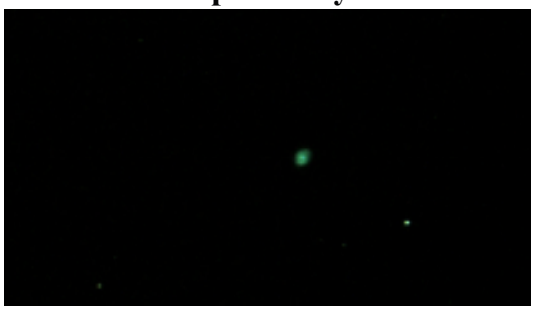

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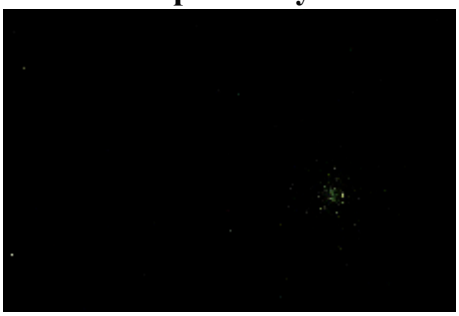

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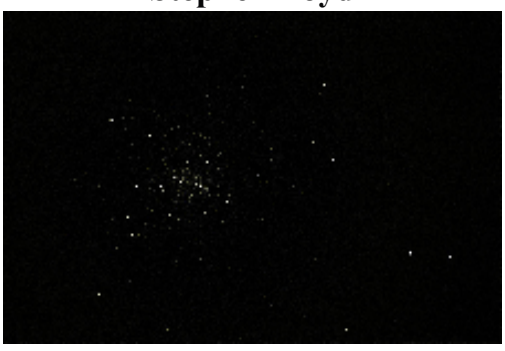

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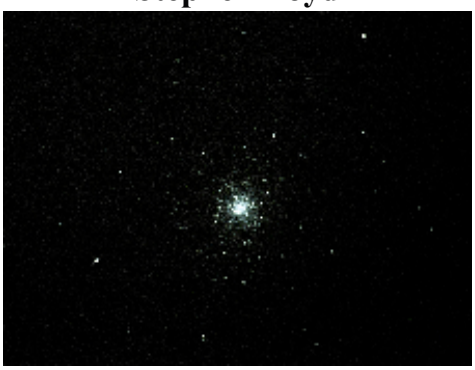
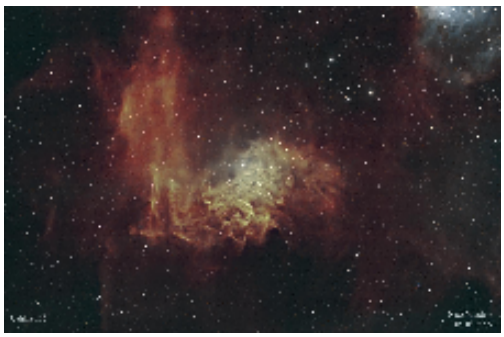


Noah Winslow



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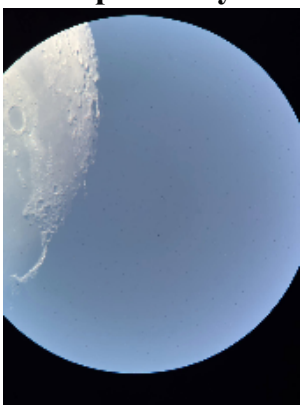

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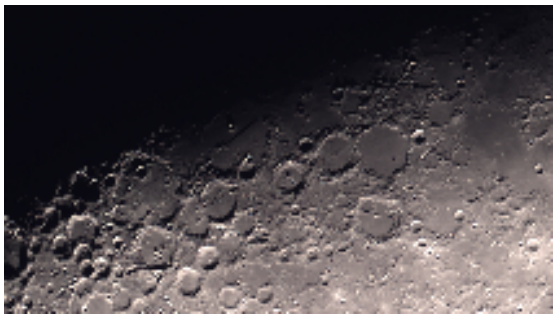

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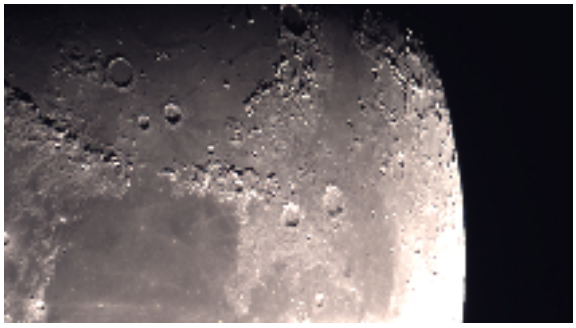

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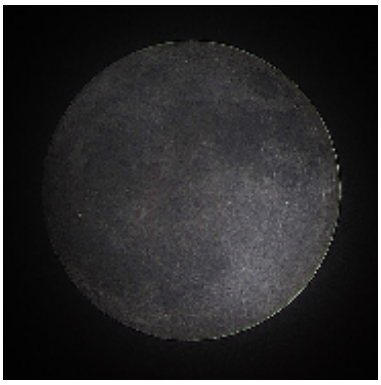

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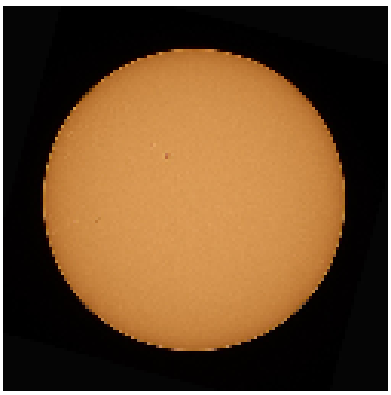
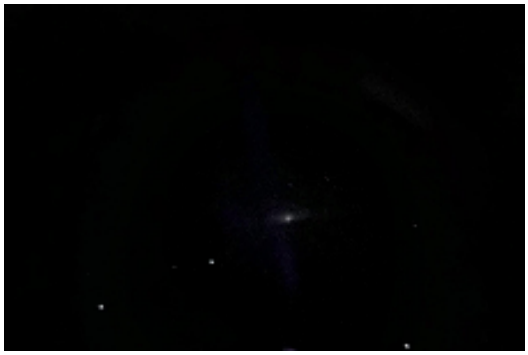


Tara Wu



Mark Hodges

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Ben Hartman

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David Thomas

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Roy LeNeave II

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Ben Hartman

Noah Winslow

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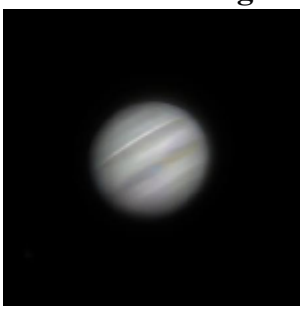

Roy LeNeave II

Noah Winslow

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