Roanoke Valley Astronomical Society

Amateur Astronomy News and Views
In Southwestern Virginia

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RVAS Annual picnic was held on September 28

The RVAS Annual picnic was held on September 28 at the facilities of the Colonial Presbyterian Church. Originally planned for the outside shelter area, it was later moved inside the fellowship hall given the weather uncertainty.

The picnic started with people arriving about 3:30 with a pizza meal starting about 5 PM. The initial plans were for observing activities both before and after the picnic, but the weather had other ideas.

Some of the images from the picnic are shown below.

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. See calendar on last page of newsletter for location. Meetings are open to the public.** Observing sessions are held one or two weekends a month 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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RVAS Member Anniversaries

Congratulations to the following members who reach the indicated number of consecutive years with the RVAS since joining or re-joining during the month of October:

Ellen and Roger Holtman (1992) – 31 years
Roger Pommerenke (1995) – 28 years
Randy and Vivian Sowden (2005) – 18 years
Ray Bradley (2014) – 9 years
Robert and Rhonda Capobianco (2019) – 4 years
Scott King (2023) – 1 year
Corey Taylor (2023) – 1 year
Randolph Walker – 1 year *

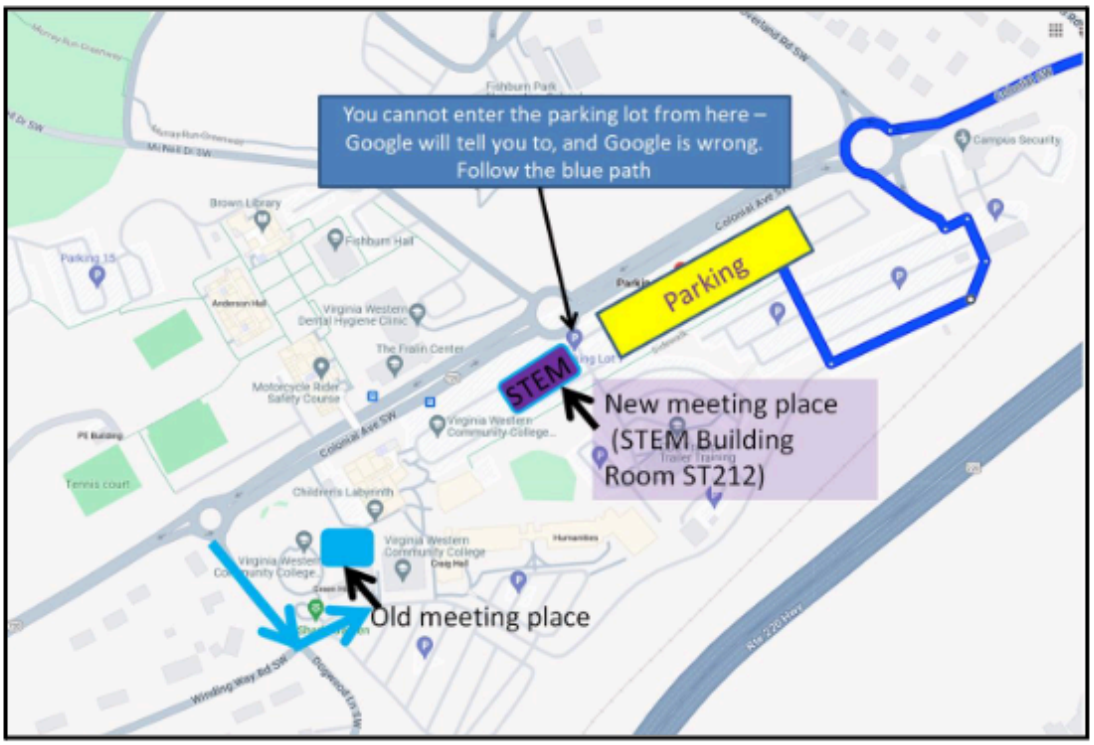
* Randolph was previously a member from 10/12 to 6/16

Thanks to all of you for being RVAS members!

Directions to RVAS Meeting Location

Virginia Western Community College STEM Building, Room ST212
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 Avenue 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 **does not** provide an entrance to the parking lot.

Note: This is a change from the previous location. It is now on the second floor in the same STEM building where we previously held meetings. The first meeting that will take place in the new location is on Monday, October 21. Our meetings will continue to meet at ST212 for the foreseeable future.

Roanoke Valley Astronomical Society

Monday, October 21, 2024, 7:30 PM

"Newton's First Law of Motion"

Presented by

Daniel Hoek, Ph.D.

Virginia Polytechnic Institute and State University

Daniel Hoek

For over three hundred years, there has been a misinterpretation of Newton's first law of motion, according to the studies and conclusions of Virginia Tech Assistant Professor of Philosophy Daniel Hoek (*"Hook"* in its Dutch pronunciation). It's a mistake that today obscures a different view of the forces pervading material reality than when expressed by Newton to the scientific community of his day. Join us at the Society's regular monthly meeting Dr. Hoek's stimulating and informative presentation.

Daniel Hoek received his master's degree from the University of Oxford and Ph.D. from New York University. His professional career includes research and lecturing at Princeton University and Visiting Positions at the University of Amsterdam and at École Normale Supérieure and at Institut Jean Nicod in Paris.

Employment 2020 - present **Virginia Tech**. Assistant Professor in Philosophy. 2019 - 2020 **Princeton University**. Louis Skolnick Postdoctoral Research Associate and Lecturer, Department of Philosophy. Education 2013 - 2019 **New York University**, Ph.D. in Philosophy, advisor Cian Dorr, joint committee with Chris Barker and David Chalmers. Dissertation: "The Web of Questions: Inquisitive Decision Theory and the Bounds of Rationality." 2008 – 2012 **University of Oxford**, Worcester College, Master of Mathematics and Philosophy with First Class honours. Visiting Positions Spring 2023 University of Amsterdam. Guest researcher at the Institute for Logic, Language and Computation (ILLC), while on teaching leave from Virginia Tech. Spring of 2017, 2018, 2019 École Normale Supérieure, Paris. Three one-semester stays at Institut Jean Nicod (IJN), hosted by François Recanati.

What's Up? Highlights

October 1 to 30, 2024

This Month:

The star of October 2024 (or at least the second half) seems likely to be comet C/2023 A3 Tsuchinshan-ATLAS, which reaches perigee on October 12th and will be an evening-sky object for a few weeks after that. Look for a close approach of the coma to global cluster M5 on the evening of the 15th, when the pair should still be above the horizon shortly after sunset. October also features the second-closest perigee of 2024 (the closest was in March), timed only 10.5 hours before the full Moon, giving us a view of the third "Supermoon" in a row. The longer nights give us even more time to enjoy the planets, with all of them prominent this month with the exception of Mercury. Look for Venus as an evening object, setting an hour after the Sun at the beginning of the month but two hours later at the end of the month. Mars officially joins the "evening" planets with a rise time of 11:58 pm on the 15th. Saturn and Neptune will be rising prior to sunset for the entire month, having both passed opposition in September. Jupiter and Uranus also continue to rise earlier in the evening, with Jupiter crossing the horizon at only 8:40 pm at the end of the month. You can watch the Moon pass near Venus on the 5th, Saturn on the 14th, Neptune on the 15th, Uranus on the 19th, and Jupiter on the 21st. Two fairly bright asteroids also reach opposition in October, with (39) Laetitia achieving that milestone on the 7th and (10) Hygiea doing so on the 21st. These dates happen to coincide with the month's two prominent meteor showers, with the Draconids peaking on the 7th (10 per hour) and the Orionids peaking on the 21st (20 per hour). The Southern Taurid meteor shower, peaking on the 10th, doesn't feature as large of a meteor count, but is well-known for producing fireballs.

Celestial Events:

- October 7: Opposition of (39) Laetitia and peak of the Draconid meteor shower
- October 10: Peak of the Southern Taurid meteor shower
- October 12: Perigee of Comet C/2023 A3 Tsuchinshan-ATLAS
- October 16-17: Full "Supermoon"
- October 21: Opposition of (10) Hygiea and peak of the Orionid meter shower

Sunset and Twilight:

- Sunset ranges from 7:02pm (1st) to 6:22pm (31st)
- Evening twilight ends from 8:28pm (1st) to 7:50pm (31st)

Lunar Phases and Apsides:

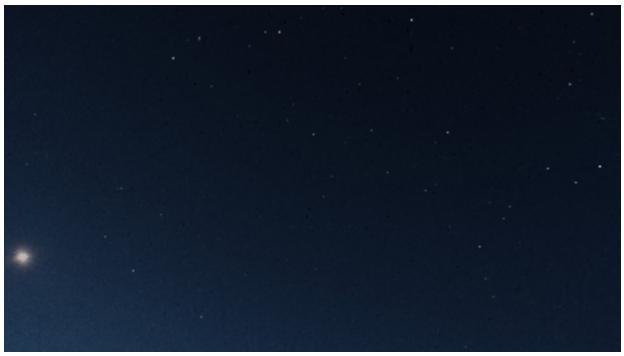
- New Moon: October 2, 2:50 pm
- Apogee: October 2, 3:39 pm (252,597 miles)
- First Quarter: October 10, 2:56 pm
- Perigee: October 16, 8:51 pm (221,938 miles)
- Full Moon: October 17, 7:27 am
- Last Quarter: October 24, 4:05 am

September 2024

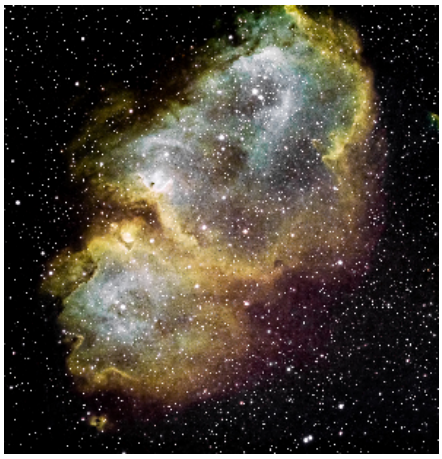
Ctrl- Click on the picture see the source file and additional information

David Thomas

David Thomas



Ben Hartman



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Tom Cerul

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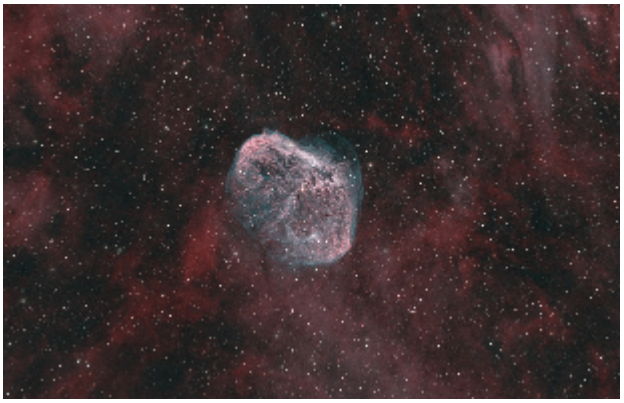

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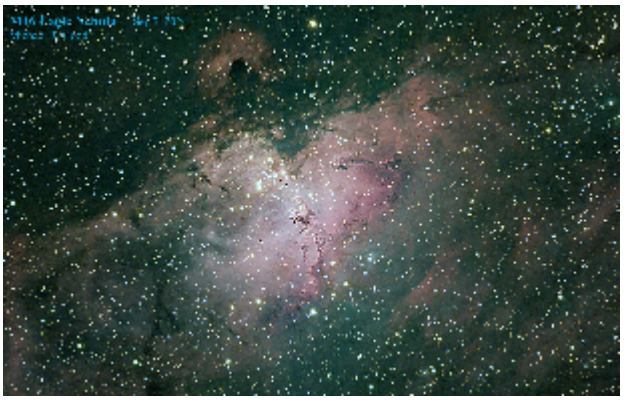
Michael Good



Michael Good

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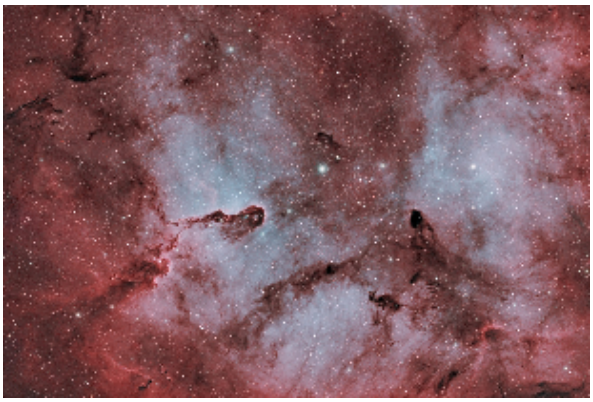
Tom Cerul



Tom Cerul

Bill Krause

Monthly Calendar

RVAS Monthly Meeting: Monday, October 21st, 7:30 p.m. (Informal "Celestial Café" chat session begins at 7:00 p.m.) STEM Building, Room ST212, Virginia Western Community College, Colonial Avenue, Roanoke, VA. (See directions in this issue) The RVAS returns to its regular meeting schedule this month and welcomes as our guest speaker Daniel Hoek, Ph.D., Assistant Professor in Philosophy at Virginia Tech. Dr. Hoek's wide ranging interests include the philosophy of mathematics, with a special emphasis on the works of Isaac Newton. This evening, he'll be sharing with us his studies of and conclusions about a misinterpretation that has persisted for 300 years regarding what Newton really meant by his first law of motion. Be sure to join us for Dr. Hoek's thought-provoking and informative talk. Additional information and the Zoom invitation will be emailed to members during the week prior to the meeting.

Weekend Observing Opportunities: The following information on Fridays and Saturdays that may be suitable for observing is provided as a courtesy to Society members and other readers. The Society assumes no responsibility for the health or safety of anyone venturing out to stargaze, and cautions all who may do so to observe appropriate health and safety precautions.

- **Friday and Saturday, October 4th & 5th.** Sunset is at 6:57 p.m. Astronomical twilight ends at 8:24 p.m. The Moon sets at 7:44 and 8:11 p.m., respectively.

- **Friday and Saturday, October 25th & 26th.** Sunset is at 5:29 p.m. Astronomical twilight ends at 6:57 p.m. The Moon rises at 1:03 and 2:03 a.m., respectively.

- **Future Weekend Observing Opportunities: November 1st & 2nd; 22 & 23rd.**

Astro-Quiz

Virtually everyone recognizes the significance of the series of dates March 21, June 21, September 21 and December 21. What is the significance of the series January 4, April 4, July 4 and October 4?

Answer to Last Month's Quiz: Last month we asked readers to complete the following sentence: "All binoculars with the same magnification and same diameter objective lens size have the same _____." The answer is focal ratio, which is symbolized as "f/". Magnification and the diameter of the objective lens size are related by the formula "Magnification = Focal Length divided by Aperture." Moreover, an image that has a greater focal length is larger. The portion of a scene that will fit in the image area decreases as the image size increases. Have a question and answer to suggest, email it to treasurer@rvasclub.org.