

The Newsletter for Keene Amateur Astronomers

Vol. 2024 No. 1

May 2024

Picture of the April 8th Solar Eclipse

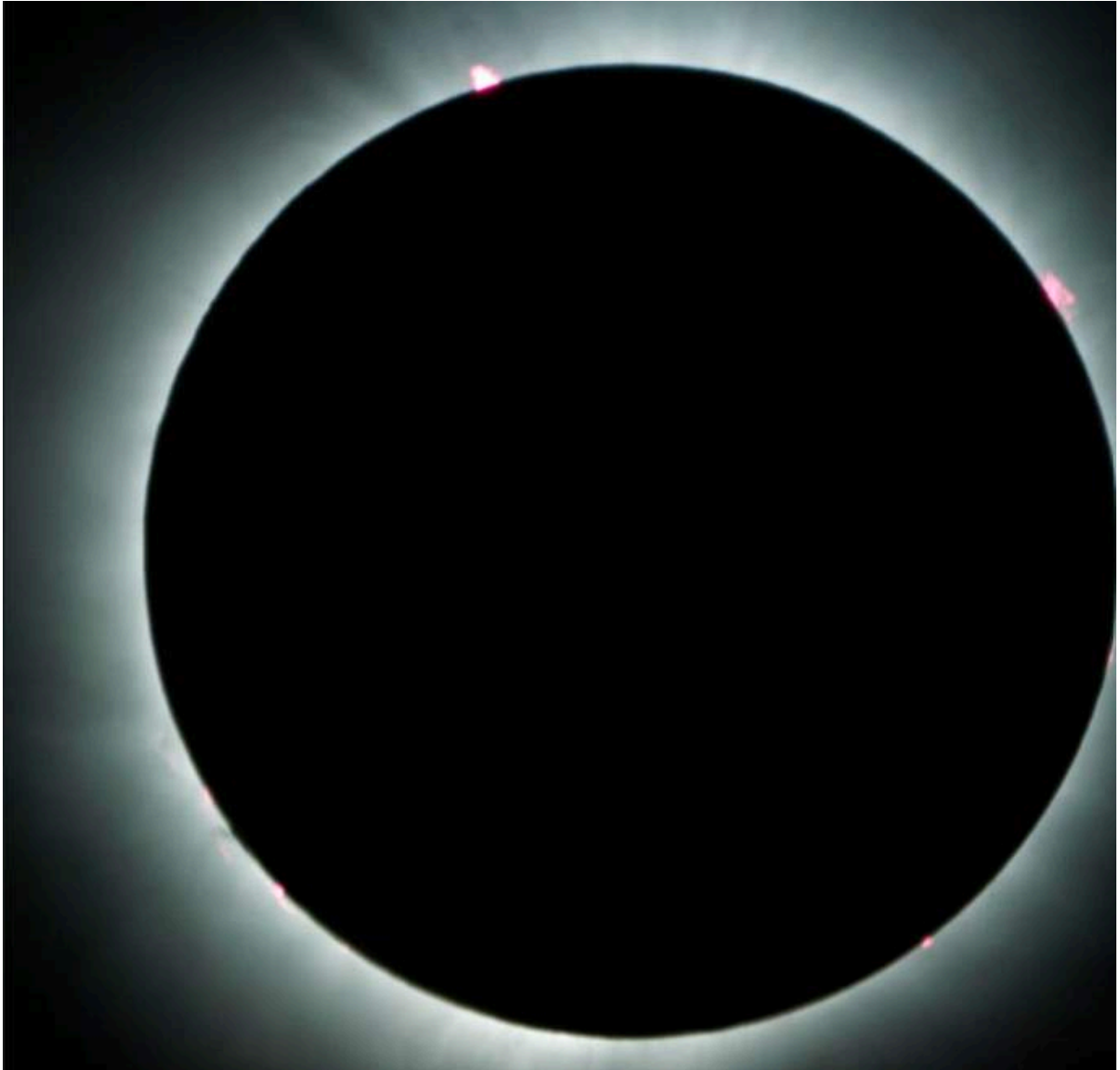


Photo taken by Christopher Watt in Browns Hill Quebec on a Meade ETX 90 Maksutov-cassegrain along with a Sony a5100 mirrorless camera to snap photos.

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Editor's Message

Welcome to the very first newsletter for Keene Amateur Astronomers. I want you to know that this is a newsletter for you. Your feedback, input, and contributions are welcome. The goal of this newsletter is to highlight you, your pursuit of astronomy, your passion for stargazing, and club news. We are all here to learn more. To help all of us expand our knowledge and love of the night sky, information provided by the Night Sky Network and other resources will be included in each month's newsletter.

You will also find resources for individuals new to star gazing, monthly objects of interest to see, and some tips on how to best see those objects.

I am so excited about sharing this first newsletter with you. There is a little bit of everything in here from club news, individuals sharing their eclipse stories and pictures, a video that highlights what to look for this month, and a webinar, A Brief History of Everything, that club members can attend virtually. You will also find information on the night sky and how dark our skies are, a star map for the month of May, Double Stars you can see with binoculars, and an opportunity to see the crescent Moon as it passes M44, the Beehive Star Cluster on May 13th.

Let's hope for clear skies so we can get out and observe the night sky and the wonders it holds.

Since this is a newsletter for our members, please feel free to send me information and pictures that can be included in future monthly newsletters.

I hope you enjoy this newsletter.

- Susan R. Rolke

Eclipse Reports

Bob Taylor reported six neighbors joined him and his wife to view a partial solar eclipse on their back porch. They ranged in age from 5 to 90 years old. All of them had a little experience with the night sky except the 5 year old, but none on solar eclipses. A solar telescope was set-up to view the one sun spot in the center of the sun along with the advancing moon across the sun. They asked some really good questions about the eclipse and Bob was able to answer them all to their satisfaction. They also had easy access to watch totality a number of times during the event on NASA TV, which they covered from Mexico to Maine. Bob reports that they got to see Baily's Beads, the Diamond Ring, the Corona and a flare from the sun at 5 pm. At the peak of coverage, at 96.5%, it got chilly and a cold breeze came up. It was amazing how much sunlight there was at that percent coverage.

A friend of Bob's called a few days before the eclipse saying she and friend were afraid of the eclipse and Bob was able to explain to her what the eclipse was about and she and her friend were able to watch the partial eclipse from her house and they were glad they did.

Junie Esslinger reported that he was able to see the solar eclipse in totality from a great location at his sister's in Montpelier. He reported during totality he was able to see the Diamond Ring, the corona and the solar flare at 5pm. He also was able to see Jupiter, Venus, many other stars and constellations. But the most impressive thing to him was this amazing beautiful light blue sky starting from the horizon in all directions up into the sky. He also mentioned a significant temperature drop and cool breeze.

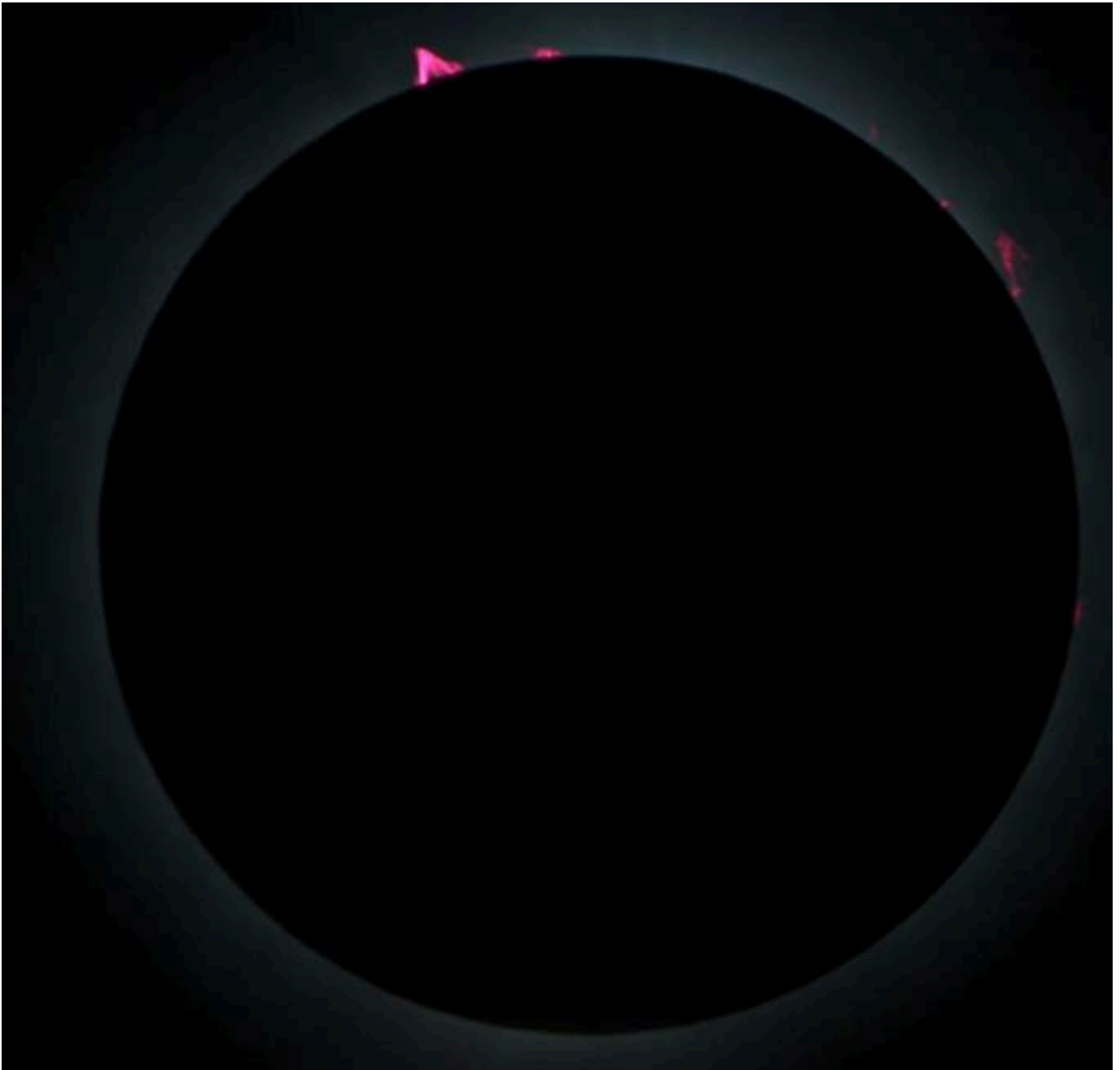
Christopher Watt has a wonderful eclipse experience. He spent a few days scouting out spots as close to the center of totality as he could find on Google maps, and settled on some farmland on Browns Hill in Quebec. He reserved a room close to it in Sherbrooke, and crossed his fingers for clear skies. It was a 3.5 hour drive. He took his Meade ETX 90 Maksutov-cassegrain, along with a Sony a5100, mirrorless camera, to snap photos. He has used the setup to capture the whole lunar disc, so he figured it would work well for the eclipse.

The location was absolutely perfect, with a full 360 view of the horizon. Skies were clear but my telescope guiding malfunctioned seconds before totality (curse you, autostar!). Luckily, he was able to manually point it in the right direction to snap some photos without missing the opportunity to view totality with his naked eyes.

Per Christopher, "We all know how the drive back was, but it was absolutely worth it!"

His pictures are on the next few pages.

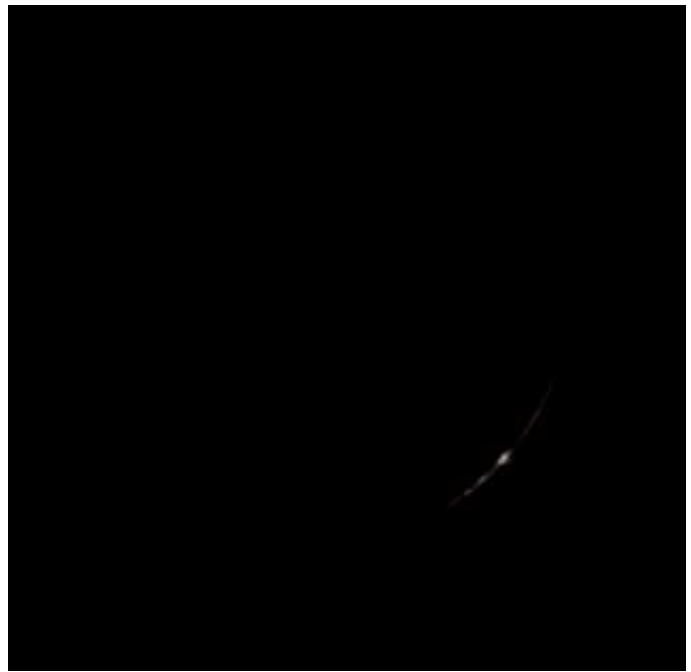




Gabriel Klueh traveled to Lyndonville VT and used the club's loaner 4.5 inch Orion Dobsonian telescope and his iPhone to capture the following pictures. He captured this great sequence of photos of the eclipse.







Susan Rolke traveled to Sandy Creek, NY and viewed the total solar eclipse from the shore of Lake Ontario. She says it was cloudy at the start of the eclipse and they were only able to view the sun by its reflection on the windshield of her car. However, the clouds began to clear and she was able to observe most of the partial eclipse leading up to totality. Just prior to totality the high altitude clouds cleared and she was able to see Baily's Beads, the Diamond Ring, and two large prominences coming off the Sun. She observed a dramatic drop in temperature and indicated the shore birds became rather noisy. Jupiter was clearly visible but lower altitude clouds to the right of the eclipsed Sun obscured Venus.

Susan captured pictures of indirect images of the eclipse through a pinhole image, the horizon during totality, and totality with her cellphone.



Eclipse Outreach

Susan Rolke was the club's eclipse ambassador. She had a busy month heading up to the eclipse. As part of the NASA Partner Eclipse Ambassador program, she hosted 11 eclipse talks at local libraries and Franklin Pierce University. Three venues had to turn interested patrons away due to the room being filled to capacity. Susan provided information on the eclipse and how to safely view it to approximately 350 individuals who attended these talks.

In addition to speaking at libraries, Susan and her eclipse partner, Raven Groblewski, spent the day at Jaffrey Grade School sharing information with over 250 students and their teachers in order to prepare them for the solar eclipse. Unfortunately, the day they were scheduled to go to Rindge Memorial School was a snow day and they were unable to reschedule the event.

Susan worked with several high school volunteers that served as NH Youth Eclipse Ambassadors to lead the after school event at Conant Middle High School. All students and staff at the school were provided solar viewing glasses for the event. Over 200 students, staff, and family members participated in the event.

Susan and Raven worked with individuals at Franklin Pierce University to host an event to view the partial eclipse. Raven hosted the event. Over 250 college students and faculty participated in this event.

Currently Susan is working on creating a time capsule at her school that will be opened in 2079 when the Monadnock region will experience a total solar eclipse.

The Observatory

A work session at the observatory on Sunday, April 21st was a huge success. Eight members arrived at 9 am to tackle brush and small tree removal along the west barrier at the observatory and work on the leaking observatory metal roof. By noon, all of the brush and small trees had been removed from the west wall, and the roof leaks on the west side of the roof had been repaired.

At the next scheduled work session in June, brush and trees will be removed along the south barrier and the roof leaks on the east side of the observatory will be worked on.

May Business Meeting

The May 10th business meeting at 7pm will take place at the Sullivan observatory with observing to follow, weather permitting.

Observing

This month's observing of the planets is a predawn event with Saturn and Mars standing on opposite sides of a crescent moon on May 4th and a gorgeous, super-close Saturn-Moon conjunction unfolds from 4:30 to 5:00 am on the 31st.

To find out skywatching tips for May, click on the following links (in blue and underlined) to learn more.

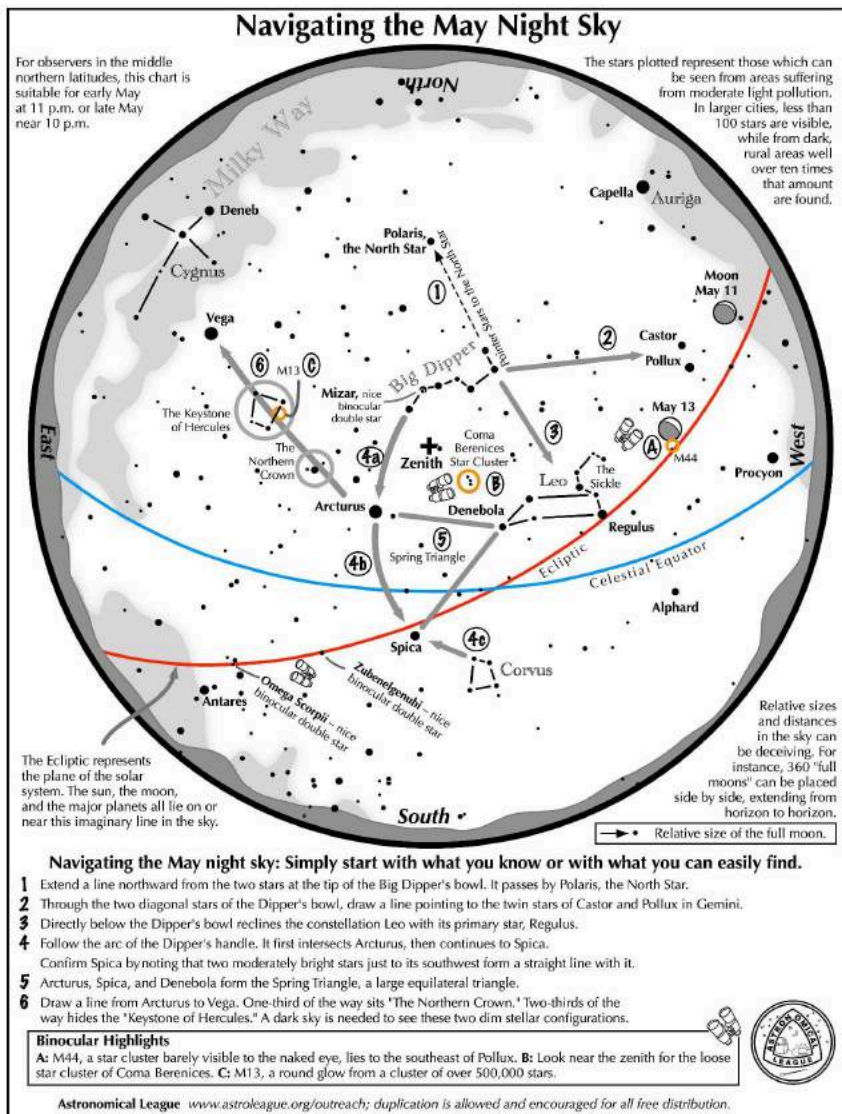
- Video: [What's Up May 2024 Skywatching Tips from NASA](#)

[May 2024](#)

Click on May 2024 above to open up a full size printable version of the image to the left. These Star Maps are provided by the Astronomical League and are available on the Night Sky Network's website.

Use the map to learn how to navigate to objects to observe using familiar objects you know.

Several double stars that are great to view with binoculars are visible this month.



- Don't miss the crescent [Moon as it passes the Beehive star cluster](#), M44, on May 13th, 90 minutes after sunset.
- Looking for more Double Star Binocular Targets. Check out these [Double Stars in the May sky](#). Each of these pairs is part of the Astronomical League's Double Star Binocular Observing Program.

Night Sky Network Online Webinar

The Night Sky Network hosts monthly webinars for members to learn more about space and current research. Keene Amateur Astronomers is part of the Night Sky Network. As a member of KAA you are able to create an account with the Night Sky Network at <https://nightsky.jpl.nasa.gov/>. After creating an account, our Night Sky Network coordinator will approve your account after verifying your membership and you will be able to virtual attend upcoming webinars.

This month, join the NASA Night Sky Network on Tuesday, May 28 at 6:00 PM Pacific Time (9:00 PM Eastern) for **Brief History of Everything** presented by Patrick C. Breysse. Learn how the Universe changed from being filled with hot hydrogen gas to what we know today!

Dr. Patrick Breysse is currently a James Arthur Postdoctoral Fellow at New York University, joining the faculty at Southern Methodist University as an Assistant Professor of Physics this fall. He received his Ph.D. from the Department of Physics and Astronomy at Johns Hopkins University. Patrick's research focuses on a new way of mapping the distant universe which can watch the earliest stars form, study how the universe evolves, and look for new physics beyond standard models. He also plays the euphonium (kind of a small tuba), and enjoys hiking and science fiction novels.

NASA Night Sky Notes, May 2024



This article is distributed by NASA's Night Sky Network (NSN).

The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

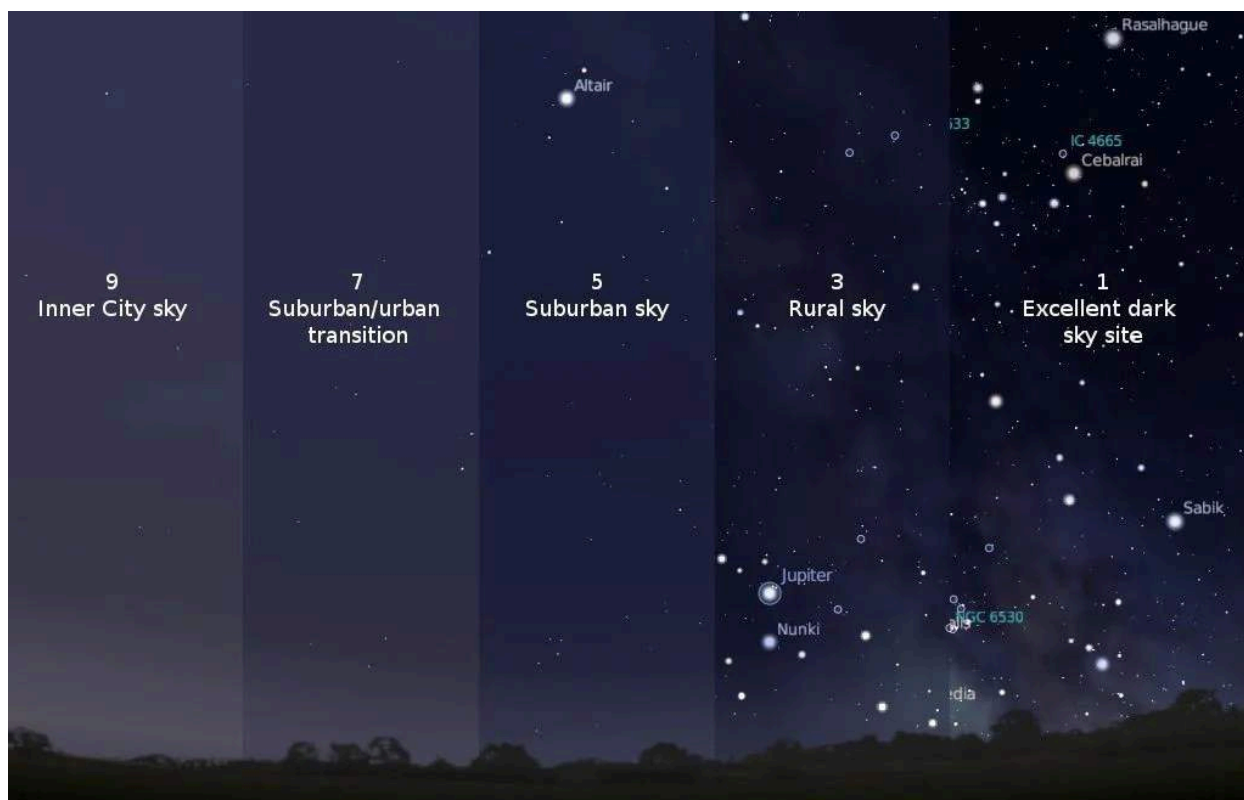
May's Night Sky Notes: Stargazing for Beginners

By Kat Troche

Millions were able to experience the solar eclipse on April 8, 2024, inspiring folks to become amateur astronomers – hooray! Now that you've been 'bitten by the bug', and you've decided to [join your local astronomy club](#), here are some stargazing tips!

The Bortle Scale

Before you can stargaze, you'll want to find a site with dark skies. It's helpful learn what your [Bortle scale](#) is. But *what is* the Bortle scale? The Bortle scale is a numeric scale from 1-9, with 1 being darkest and 9 being extremely light polluted; that rates your night sky's darkness. For example, New York City would be a Bortle 9, whereas Cherry Springs State Park in Pennsylvania is a Bortle 2.



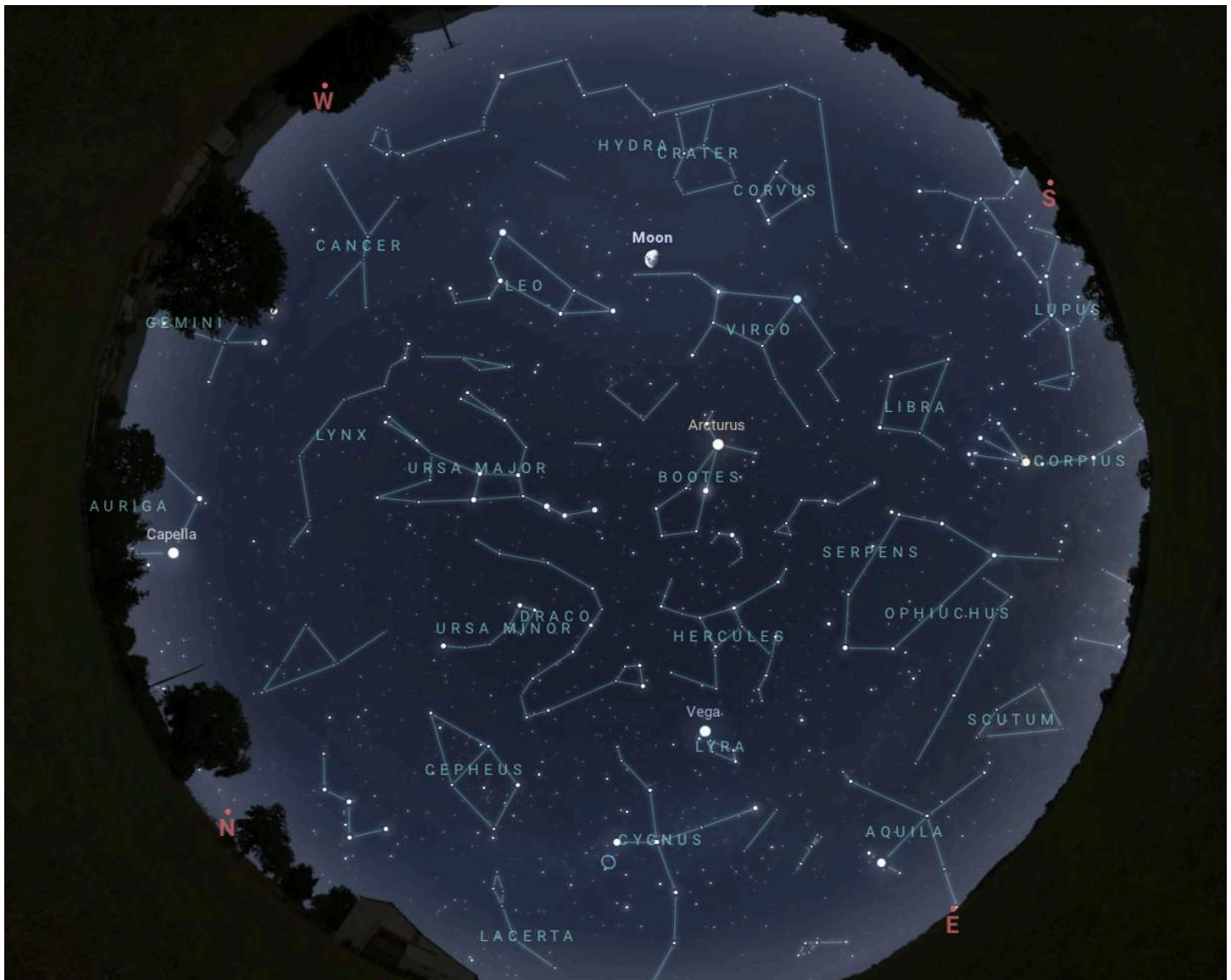
The Bortle scale helps amateur astronomers and stargazers to know how much light pollution is in the sky where they observe.

Credit: International Dark Sky Association

Determining the Bortle scale of your night sky will help narrow down what you can expect to see after sunset. Of course, other factors such as weather (clouds namely) will impact seeing conditions, so plan ahead. Find Bortle ratings near you here: www.lightpollutionmap.info

No Equipment? No Problem!

There's plenty to see with your eyes alone. Get familiar with the night sky by studying star maps in books, or with a planisphere. These are great to begin identifying the overall shapes of constellations, and what is visible during various months.



A full view of the northern hemisphere night sky in mid-May. Credit: Stellarium Web.

Interactive sky maps, such as Stellarium Web, work well with mobile and desktop browsers, and are also great for learning the constellations in your hemisphere. There are also several astronomy apps on the market today that work with the GPS of your smartphone to give an accurate map of the night sky.

[Keep track of Moon phases](#). Both the interactive sky maps and apps will also let you know when planets and our Moon are out! This is especially important because if you are trying to look for bright deep sky objects, like the Andromeda Galaxy or the Perseus Double Cluster, you want to *avoid* the Moon as much as possible. Moonlight in a dark sky area will be as bright as a streetlight, so plan accordingly! And if the Moon is out, check out this Skywatcher's Guide to the Moon: bit.ly/MoonHandout

Put On That **Red** Light

If you're looking at your phone, you won't be able to see as much. Our eyes take approximately 30 minutes to get dark sky adapted, and a bright light can ruin our night vision temporarily. The easiest way to stay dark sky adapted is to avoid any bright lights from car headlights or your smartphone. To avoid this, simply use red lights, such as a red flashlight or headlamp. **The reason:** white light constricts the pupils of your eyes, making it hard to see in the dark, whereas red light allows your pupils to stay dilated for longer. Most smartphones come with adaptability shortcuts that allow you to make your screen red, but if you don't have that feature, use red cellophane on your screen and flashlight.

Up next: why binoculars can sometimes be the best starter telescope, with [Night Sky Network](#)'s upcoming mid-month article through NASA's website!