

Event Horizon

Volume 32, Number 9
September 2025



From The Editor

Summer is coming to a close, and the E.H. is back! ...With a return of *HAA Explorers*, courtesy of new HAA member Fiza Mehfil!

Lots of awesome images were taken by HAA members this summer, and some of these are featured in the expanded Eye Candy gallery this month.

Clear Skies!

Bob Christmas,
Editor
editor 'AT' amateurastronomy.org

Chair's Report by Sue MacLachlan

Welcome back everyone! I hope that everyone has had a good summer. Hopefully some of you got to do some observing and imaging. Between all of the smoke and the heat warnings, it's a wonder that anyone saw anything!

But thanks to the Binbrook team, who have been busy this summer, we have had many opportunities to get out to the conservation area. A big thank you to the team for all of their efforts.

The club picnic was held on a very hot Saturday in August. A small crowd gathered for the potluck dinner and other members came by later in the evening to help with the public outreach. As always when a group of amateur astronomers get together there is lots of good conversation and comradery. We had some brave members of the public come to be amazed by views of the full moon but alas, meteors were scarce. *(Continued on [page 2](#))*

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Chair's Report (continued)

A number of HAA members attended the Starfest star party this summer. Although the weather didn't cooperate, the lectures on dark matter were very interesting and informative. One of the highlights of Starfest is the door prize draw on Saturday evening. Two of our members won door prizes! Congrats and thanks to the prize sponsors!!

On Friday September 12 our speaker will be *Dr. Chris Jillings*, Senior Research Scientist at Snolab in Sudbury. Dr. Jillings will talk to us about how to know the Sun from a hole in the ground.

September 19 - 21, 2025 is the *HAA Dark Sky Star Party*. There is still some limited room available if you are interested in attending. All of the information about the Dark Sky Star Party can be found on the HAA website.

Looking ahead to October, the Annual Meeting will be held on Friday October 17, 2025. Please note that this date is *one week later* than our usual meeting due to the Thanksgiving holiday. The Annual Meeting this year will be the final step in the transition from the HAA association to the HAA incorporation. A new Council will be voted in at the October Annual Meeting and currently both the Chair and the Membership positions are open. If you are interested in serving on Council please contact Sue MacLachlan at chair@amateurastronomy.org.

Also at our meeting in October we will be joined by Matteo Statti, who is studying astronomy and astrophysics at York University. Matteo will be presenting a short talk about the Rev. D.B. Marsh Telescope before the Annual Meeting begins.

On Saturday November 22, 2025, we will be holding a *Telescope Clinic* at Valley Park Library, 970 Paramount Dr, Stoney Creek, ON L8J 1L8. Mark the date in your calendar to come out, display your gear and help new amateur astronomers with their telescopes.

Just a reminder that the deadline for submitting images for the HAA calendar is midnight *Sunday September 28, 2025*. Send pictures to calendar@amateurastronomy.org.

We are also looking for images for our partnership with Dundas Valley Orchestra. At the orchestra's concert on Sunday November 9, 2025 HAA astrophotographers will have their images displayed during the concert. The deadline for submitting images for the Dundas Valley Orchestra concert is *midnight Friday September 5, 2025*. Send pictures to chair@amateurastronomy.org.

For more upcoming events check out the listing found on page 4 in the newsletter.

As always, I look forward to seeing everyone on Friday September 12th at St. Matthew on-the-Plains Anglican Church at 126 Plains Road E. Burlington and on Zoom for those who cannot attend in-person.

Clear skies,

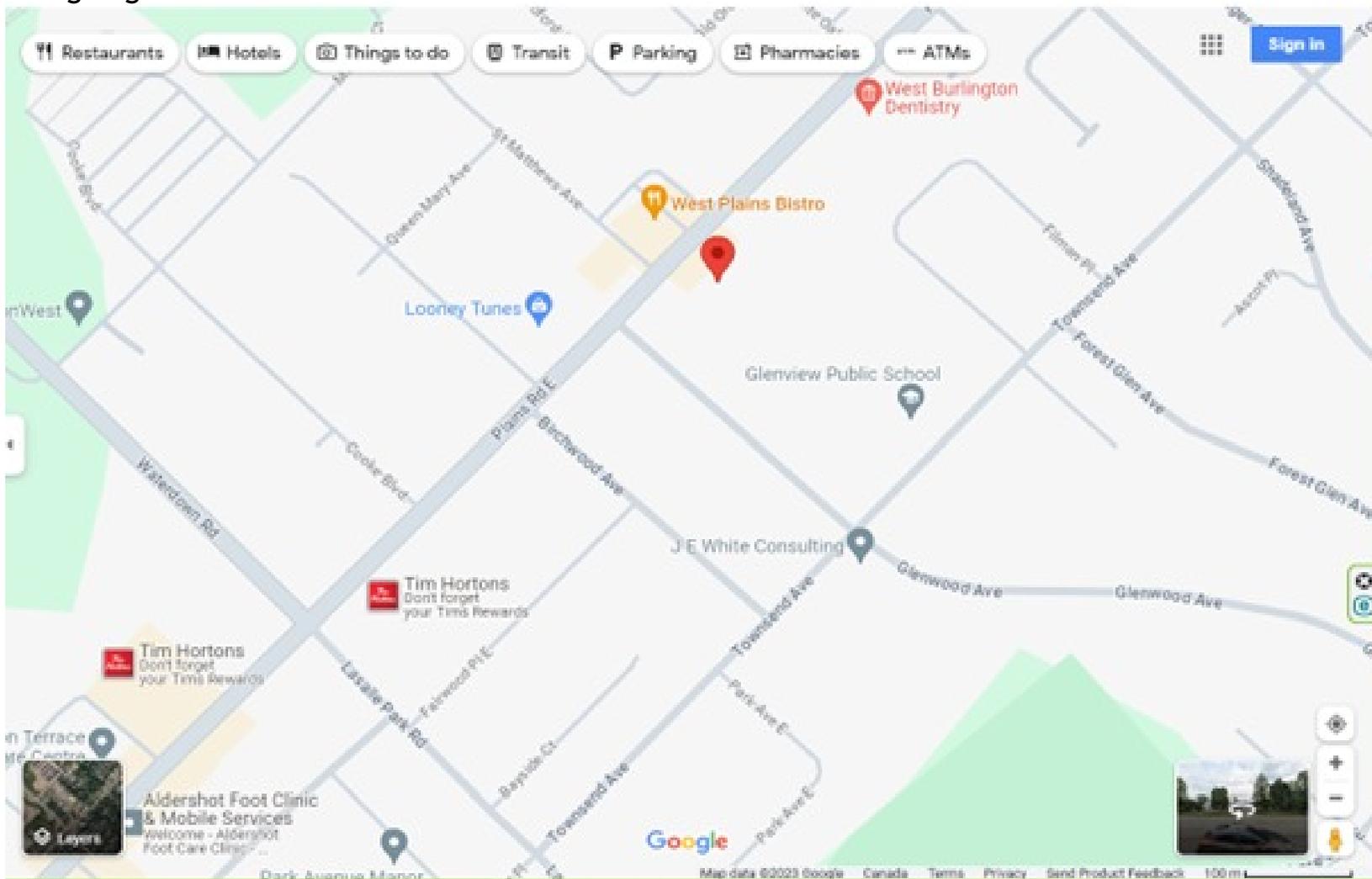
Sue MacLachlan *chair 'AT' amateurastronomy.org*

Masthead Photo: *The Eagle Nebula (M16) in Serpens*, by Ken Leedham.

Taken with a Celestron Origin, using a nebula filter. Total exposure time: 15 minutes.

Meeting Location

Our upcoming meeting is scheduled for *September 12th, 2025*, at St. Matthew on-the-Plains Anglican Church. St. Matthew's is located at 126 Plains Road East, Burlington, Ontario. Doors open at 7:00 and the meeting begins at 7:30.

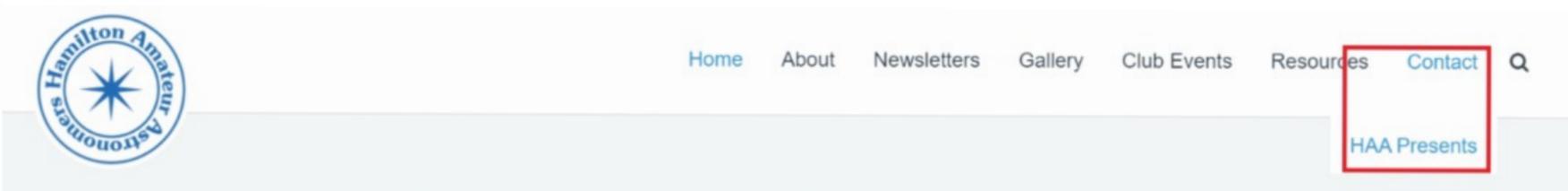


*St Matthew on-the-Plains Anglican Church (indicated with red locator)
Image generated using Google Maps*

“HAA Presents”

Members of the public of any age in the GTHA can now request an in-person or virtual presentation from the HAA directly on our website.

Simply navigate to www.amateurastronomy.org and select “Contact” from the top menu bar and then click on “HAA Presents” (see image below). You will be presented with a request form and once all required fields are entered, click on the “Submit” button and you will see a confirmation message that your request has been successfully submitted.



Once received, our Public Education Director, Jo Ann Salci, will respond to your request within 5 business days to discuss next steps. If you have any questions, feel free to send an email to: haapresents@amateurastronomy.org.

2025-2026 Event Dates

Saturday Sept. 6, 2025	Moon and Saturn Public Viewing	Bayfront Park, Hamilton; Tentative
Friday Sept, 12, 2025	Monthly Meeting	St. Matthew on-the-Plains Anglican Church, 126 Plains Rd, Burlington
Sept. 19-21, 2025	Dark Sky Star Party	Bruce Peninsula (Advance registration required)
Saturday Oct. 4, 2025	Moon and Saturn Public Viewing	Bayfront Park, Hamilton; Tentative
Friday Oct. 17, 2025	Monthly Meeting Annual General Meeting	St. Matthew on-the-Plains Anglican Church, 126 Plains Rd, Burlington
Saturday Nov. 1, 2025	Moon and Saturn Public Viewing	Location TBD; Tentative
Sunday Nov 9, 2025	Dundas Valley Orchestra Concert in Partnership with the HAA *	St Paul's United Church, 29 Park Street West, Dundas 2:00 - 5:00 pm
Friday Nov. 14, 2025	Monthly Meeting Speaker: Doug Turner and the Calendar preview	St. Matthew on-the-Plains Anglican Church, 126 Plains Rd, Burlington
Saturday Nov. 22, 2025	Telescope Clinic	Valley Park Library, Stoney Creek
Friday Dec. 12, 2025	Monthly Meeting Seasonal Social Speaker: John Moores, author of <i>Daydreaming in the Solar System</i>	St. Matthew on-the-Plains Anglican Church, 126 Plains Rd, Burlington
Friday Jan. 9, 2026	Monthly Meeting Speaker: Akbar Ahmed Chowdhury	St. Matthew on-the-Plains Anglican Church, 126 Plains Rd, Burlington
Friday Feb. 13, 2026	Monthly Meeting Speaker: TBD	St. Matthew on-the-Plains Anglican Church, 126 Plains Rd, Burlington
Saturday Feb. 14, 2026	Telescope Clinic/ Kids Workshop: Tentative	Valley Park Library, Stoney Creek
Friday Mar. 13, 2026	Monthly Meeting Speaker: TBD	St. Matthew on-the-Plains Anglican Church, 126 Plains Rd, Burlington
Friday Apr. 10, 2026	Monthly Meeting Speaker: TBD	St. Matthew on-the-Plains Anglican Church, 126 Plains Rd, Burlington
Friday May 8, 2026	Monthly Meeting Speaker: TBD	St. Matthew on-the-Plains Anglican Church, 126 Plains Rd, Burlington
Friday Jun. 12 2026	Monthly Meeting Speaker: TBD	St. Matthew on-the-Plains Anglican Church, 126 Plains Rd, Burlington

* **NOTE:** *The Dundas Valley Orchestra* are going to showcase pictures taken by HAA members as they play their concert on *Sunday, November 9, 2025*.

The deadline for submitting images for this event is ***Friday, September 5***.

If you have images you would like to be shown at the DVO concert, please submit them to *Sue MacLachlan (chair@amateurastronomy.org)* by September 5.



HAA Dark Sky Star Party

September 19 - September 21, 2025
Andromeda Meadow
Warton, Ontario

Come and join your HAA friends for a weekend of stargazing on the Bruce Peninsula.

Cost: \$25 per person, \$50 Family
\$37.50 1 Parent/Guardian & 1 child under 18



Weekend Events

- Visual observing and astrophotography opportunities
- Keppel Croft Gardens visit
- E.S. Fox Observatory visit
- Dinner onsite Saturday (optional extra cost)
- There are no lectures

Ground camping and trailer sites onsite
Motels, Cottages rentals etc. nearby

ONSITE AMMENITIES

- Portable Washrooms
- Gas generator for charging astronomy equipment only
- Gathering tent

CONTACT INFORMATION

Sue at
starparty@amateurastronomy.org
Matt at
mattmannastro@outlook.com



This is a remote site with no:
water,
electricity,
flush toilets,
showers,
electical or water
hookup for trailers.

REGISTRATION OPENS Saturday May 10, 2025

2026 HAA Celestial Events Calendar Image Submission DEADLINE Midnight, Saturday, September 28th, 2025

Starting now, please feel free to submit as many images as you like to calendar@amateurastronomy.org

Other than the weather, the only photographic limit for a calendar submission is your own imagination for incorporating some astronomy related items in to an image. Plus, you don't have to wait until **midnight on September 28th, 2025** to send in your photographs. It's not too soon, there already have more than half a dozen image submissions!

Send as many of **your own photos** as you like BUT *please don't send in any images that have already been printed in one of our past Calendars*. As you probably know, there is a limited amount of space in our calendar so we may not be able to print all of the images that you submit. But that's OK because there is always next year for any images that do not get selected this time around as they can be resubmitted to a future calendar.

When submitting an image, if it image is over 10 megabytes then please send it (or them if there are multiple images) via a download link such as *WeTransfer* or *DropBox*. Images that are less than 10MB can be submitted through email provided the total size of all of the included images is less than 10MB per email. When submitting by email, please send the images as attachments rather than as items embedded in the email.

Submissions (or download links) should be sent to calendar@amateurastronomy.org along with a short description of the main subject of your image, e.g., "M8", "Zodiacal Light", or "Total Lunar Eclipse" and its associated file name. We need to be able to make sure that we get the right description with the corresponding image.

The technical guidelines for submitted images are found below but please consider these to be guidelines only. Images that do not meet these guidelines are more than welcome. However, the more an image varies from the guidelines, the more likely that reproduction quality of the image will be disappointing. Also, if you have any questions about the guidelines or terms used below, please feel free to contact the editor at calendar@amateurastronomy.org.

Finally, here's a pre-emptory **THANK YOU to everyone** who takes an astronomy related photograph. Even if you decide not to submit your images to the HAA Calendar your pursuit of an image helps us all.

Ed.

Technical Guidelines

1. ***** Orientation *** - Landscape**, i.e. the image is wider than it is tall. Non-landscape images will likely need to be cropped to fit onto a calendar page.
2. **Aspect Ratio** - 1.294:1, or 11" (28cm) x 8.5" (21.6cm) which is the same as letter-sized paper. As with orientation, images that do not conform to this aspect ratio will likely need to be cropped or have borders added to the edges of the image
3. **Resolution** - Our printer **strongly recommends 300 pixels per inch or higher** for best results and a minimum of 150ppi. Images with significantly lower resolution will may appear fuzzy or out of focus when printed.
4. **File Type** - **TIFF or PSD** files are preferred. Any images submitted that have been turned into a jpg image file format prior to submission will **ALWAYS** result in the loss of image quality when the image is prepared for printing.

(Continued on [page 7](#))

5. **File Size - maximum 100MB** (this would be a very large TIFF file) per file. Images over 10MB should be submitted using a file transfer service such as WeTransfer. Images under 10MB can be submitted in an email.
6. **Image Colour Depth** - 14 to 16 bits per colour channel is preferred and a minimum 8 bits per channel is acceptable. This colour depth specification applies to greyscale (black and white) images as well.
7. **Image Colour Space** - In order of preference, CMYK (optimal), Adobe RGB or ProPhoto RGB, and sRGB are all acceptable image colour spaces. Please note that sRGB colour space submissions will likely result in some noticeable colour shifting when printed.

Overall Image Dimensions in pixels - Items 1, 2 and 3 above result in recommended dimensions of **3375 pixels by 2626 pixels** and the minimum recommended dimensions for a full page image are 1687px by 1317px. The size requirement (both width and height) include an allowance of 3.175mm or 1/8 inch on each side of the printed page to aid in paper alignment. The printer refers to this alignment area around the outside of the image as “the bleed.” Therefore it is strongly suggested that important elements of the image not be placed in the bleed area.

Images smaller than these overall size guidelines are very welcome but please be aware that images significantly smaller than 1687px by 1317px cannot be used as full page images. The absolute minimum image size requirement for potential inclusion in the calendar is 844px by 656px. An image that is between 1687px by 1317px & 844px by 656px will only have sufficient print resolution to appear on one of the gallery pages at the back of the calendar.

As mentioned above the deadline for submitting an image is ***Midnight, September 28th, 2025.***

HAA Outreach Presentations with Vulnerable Sectors

The HAA executive has created a policy for any HAA member who wishes to do outreach presentations to vulnerable sectors, which includes children under 18 years of age and vulnerable adults. This does not include our general club outreach activities.

Presentations include in-person or virtual sessions where parents/guardians may not be present. **As it is not always possible to anticipate caregiver attendance at outreach activities for children under the age of 18, or vulnerable adults, it is therefore a requirement for HAA member-volunteers who work with these vulnerable populations to complete a Police Vulnerable Sector Check.**

These can be obtained only in your region of residency. Costs vary from one area to another. They will be kept on file by the HAA Education Director. No details regarding the findings of the check will be made in any way public or viewed beyond the HAA Education Director.

The HAA will reimburse any member who wishes to do outreach presentations to vulnerable individuals, provided a receipt is submitted.

Please contact Jo Ann Salci if you have any questions about this policy and/or if you wish to put your name forward to help with outreach activities to young people! This policy is effective immediately.

Calling All Telescope Enthusiasts! Share Your Gear and Experience in Our New Segment: "Talking Telescopes"

We're launching an exciting new segment for our club's YouTube channel called "Talking Telescopes"! This is your chance to showcase your equipment, share how you use it, and pass along tips and lessons learned. Whether you're working with a trusty beginner scope or a high-end astrophotography setup, we'd love to hear your story.

These short interviews will be filmed around 7:00 pm at St. Matthew's-on-the-Plains Church just before our monthly meetings (during setup time) and are a great opportunity to inspire fellow members and new astronomy enthusiasts alike. It's a fun and informal way to highlight the diversity of approaches and experiences within our community.

Interested in being featured? Please reach out to *Chris Szaban* at

talkingtelescopes@amateurastronomy.org

to schedule a time. Let's show the world what makes the Hamilton Amateur Astronomers so incredible!

HAA Helps Hamilton

The H.A.A. is accepting and collecting donations from our members and guests for local food banks at our general meetings. The H.A.A. has always valued its relationships with food banks in the community, particularly [Hamilton Food Share](#).

If you can't make an in-person meeting, you can make a donation directly to your local food bank.



HAA Explorers 2.0 --- The Moon's Influence on Tides by Fiza Mehfil

A message from the Education Director: Welcome Back! You may recall the HAA Explorers column was retired in June 2024. I am thrilled to announce that we have a new HAA member who would like to resume this column. Meet Fiza who will introduce herself below. Thank you and welcome Fiza! Let the explorations continue! — Jo Ann Salci

Author's Note: My name is *Fiza Mehfil* and I am a grade 11 student that loves learning about astronomy and aerospace engineering. I think it is incredibly important that everyone has the correct resources to learn about astronomy as well, which inspired me to continue HAA Explorers. In my free time, I enjoy reading, watching movies, and painting. I hope you enjoy my column and are able to learn something new!

The Moon's Influence on Tides

When you're walking along a beach, have you ever wondered why the tide is higher at some times of day and lower at other times of day? This question may be confusing at first, but it can easily be answered through astronomy. As distant as it seems, the Moon is the true reason that we experience different levels of tides at different times of the day.

The Sun is an incredibly large object in space and, as a result, has a strong gravitational pull that causes Earth to orbit around it. Every object with mass has a gravitational pull; even seemingly small objects like a laptop or a pencil have gravitational pulls. However, they are extremely weak due to their size. The Moon also has a gravitational pull. It is not large enough to cause Earth to orbit around it, like the Sun, but it is not small enough for the gravitational pull to have no effect on its surroundings. The Moon's gravitational pull does something a bit different: it creates the tides. As the Moon's gravity pulls Earth, Earth's mass is shifted and its oceans create the shape of a bulge on opposite ends.

(Continued on [page 10](#))

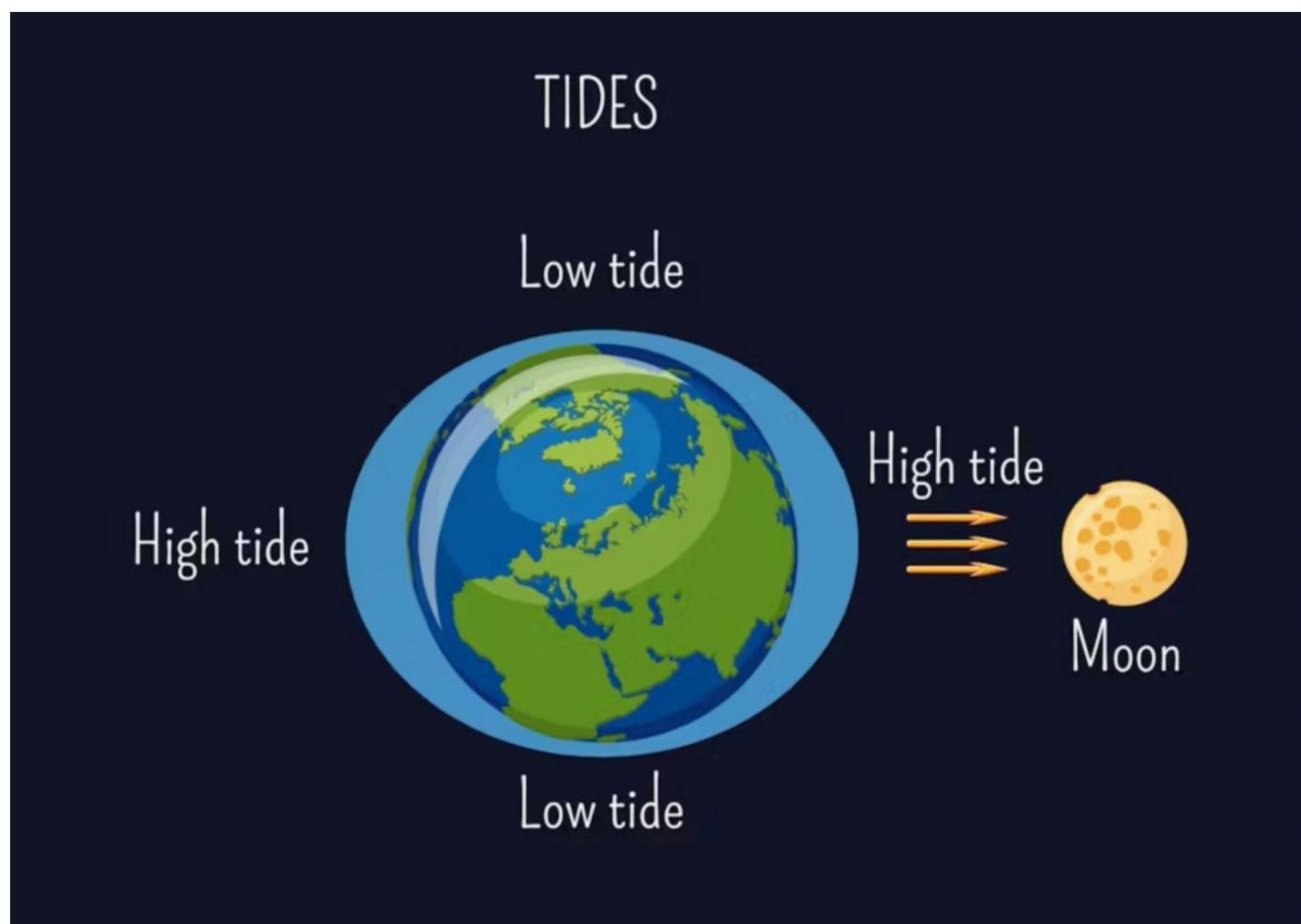


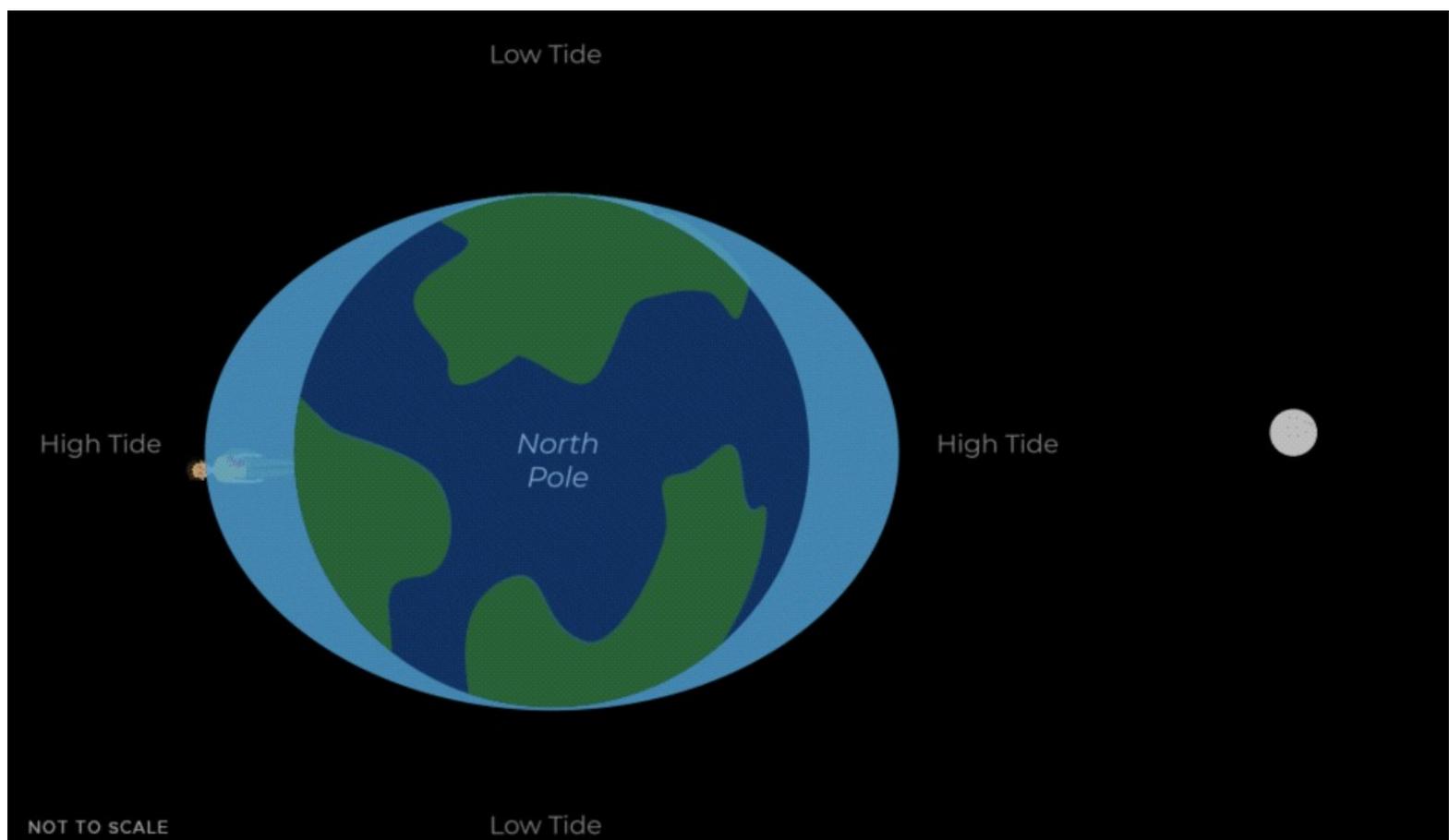
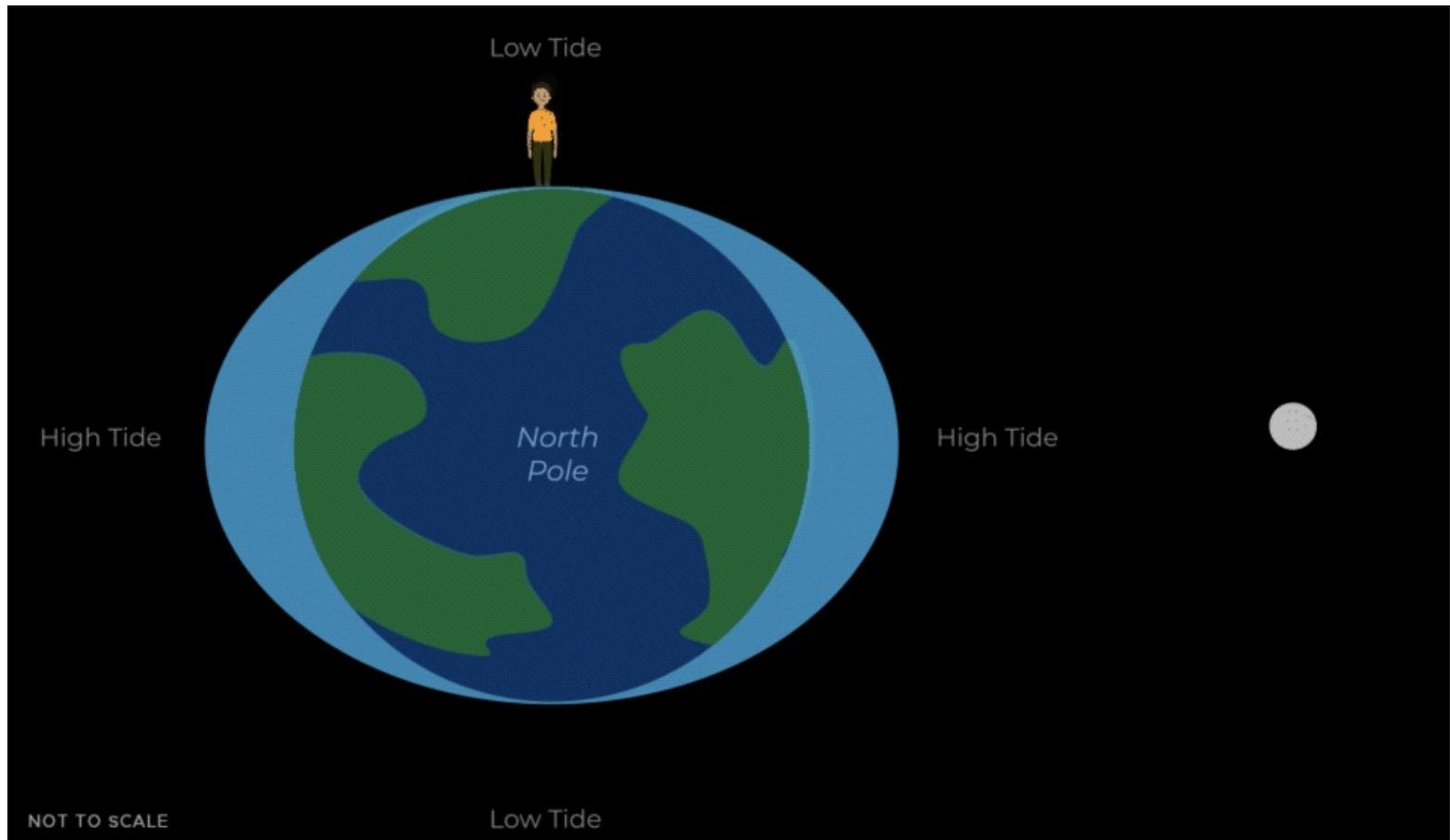
Image Credit: <https://theconversation.com/curious-kids-how-does-the-moon-being-so-far-away-affect-the-tides-on-earth-105371>

HAA Explorers 2.0 --- The Moon's Influence on Tides (continued)

When the moon's gravity pulls Earth's oceans, the water doesn't float outward. Instead, it gets pushed and squeezed until it bulges out on the side closest to the Moon and the side farthest away.

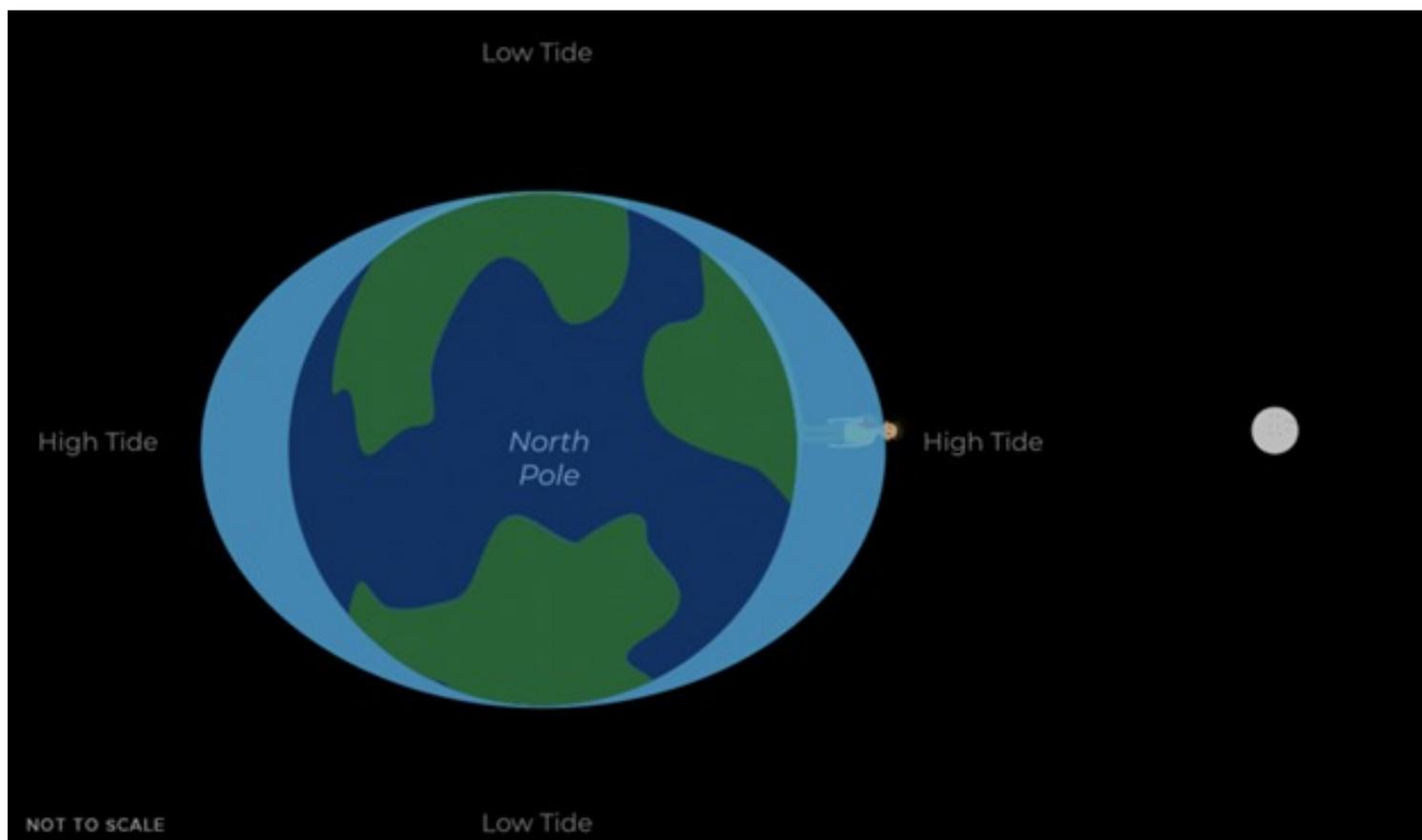
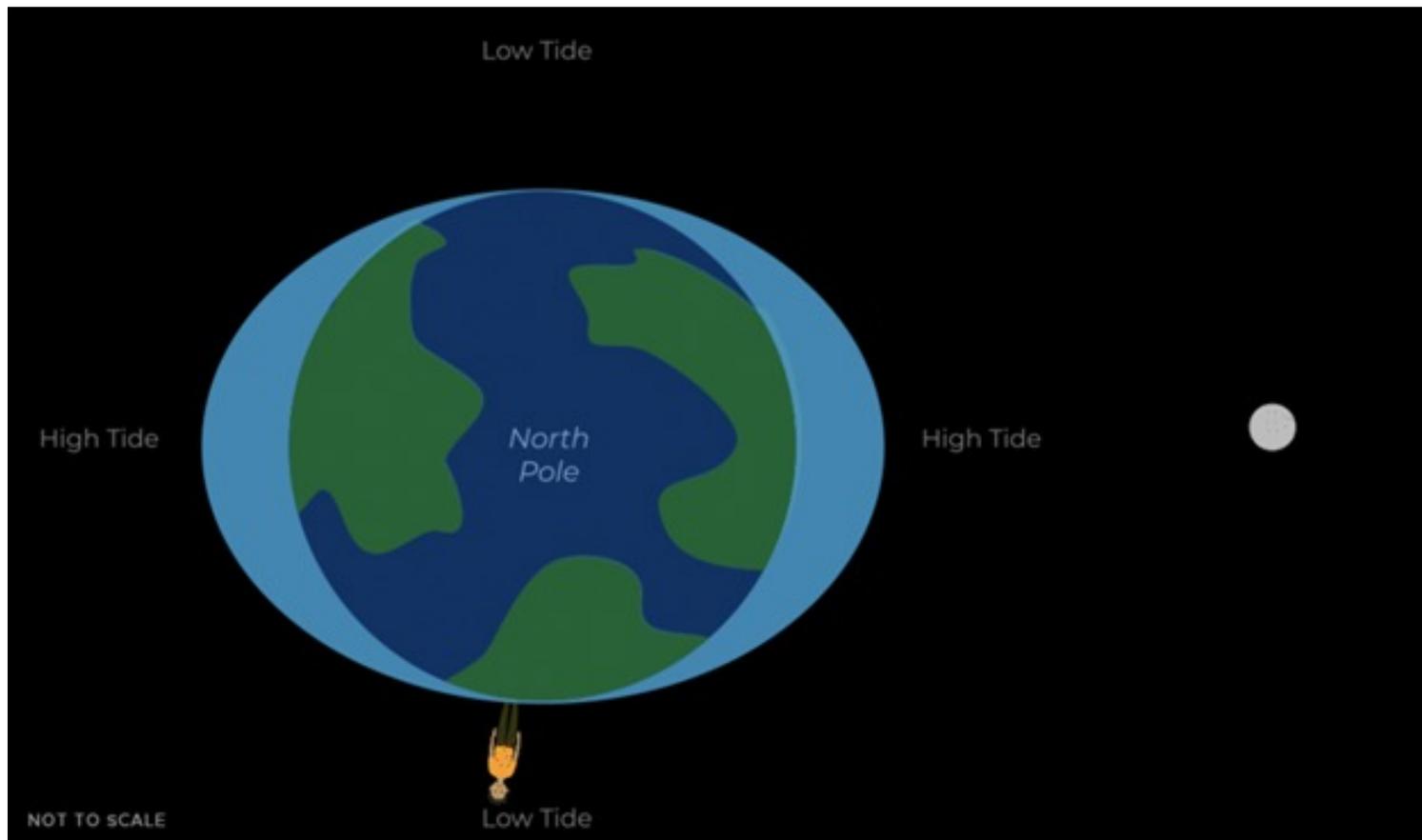
As the Earth rotates, our landmass passes through these two bulges created by the Moon. These bulges create the high tide. Per day, most shorelines experience two high and low tides. One high tide to high tide cycle takes approximately 12 hours and 25 minutes.

(Continued on [page 11](#))



Images Credit (pp 10 and 11): <https://science.nasa.gov/moon/tides/>

HAA Explorers 2.0 --- The Moon's Influence on Tides (continued)



The Moon's gravitational pull has the largest effect on Earth's tides but it isn't the only influence impacting the tides. The Sun is approximately 27 million times more massive than the Moon, which may cause you to believe its gravitational pull would impact the tides as well. However, it's also about 390 times farther away from the Moon, meaning it has a smaller role in creating the tides. Twice a month, the Earth, Moon, and Sun line up. Their gravitational power combines to create significantly high tides in the areas where the bulges occur, referred to as Spring tides, and exceptionally low tides where the water is displaced. Around a week later, the Sun and Moon are at right angles to each other, causing the Sun's gravitational pull to work against the Moon's gravitational pull. This position partially counteracts the Moon's gravitational pull and creates moderate tides, known as Neap tides.

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HAA Explorers 2.0 --- The Moon's Influence on Tides (continued)

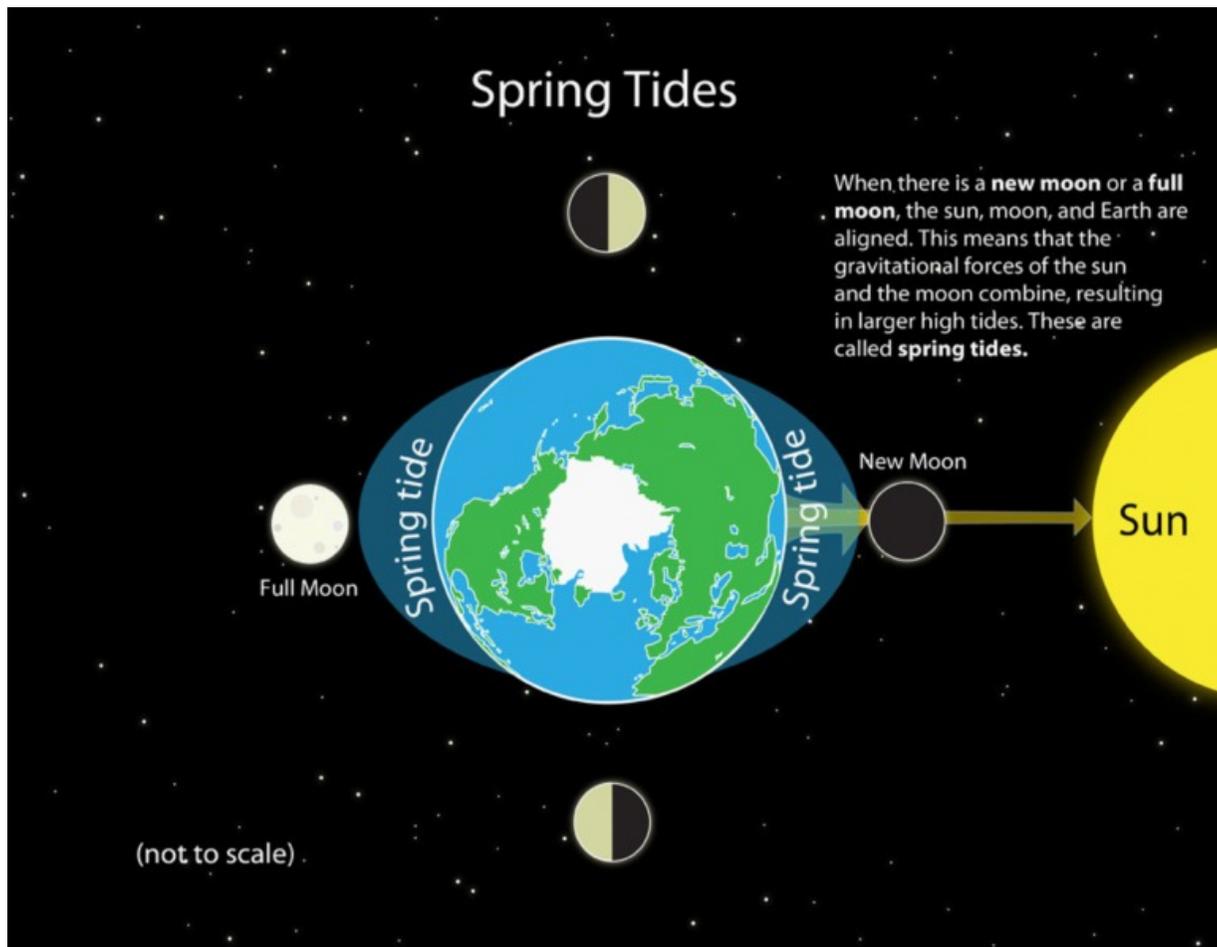


Image Credit:

<https://education.nationalgeographic.org/resource/causes-effect-tides/>

Even if you're far from the beach, you can observe this effect from your own home. Below are a few fun ways:

- You can use the website tideschart.com to find daily tide times. Pick a nearby location and watch how the times and heights change each day. Bring a notebook with you and draw what you see each time.
- If you live near a large water source, take a picture at the same time each day. Compare how the water levels change.
- Spring tides always happen when the Moon is at the full or new phase, which is when the Sun, Moon and Earth are aligned. Neap tides occur around the first and last quarter phase of the Moon because it is perpendicular to the Sun. Look up the Moon phase each night and keep a moon journal. Compare the phase of the Moon with what the tide chart says and check if you notice any patterns.

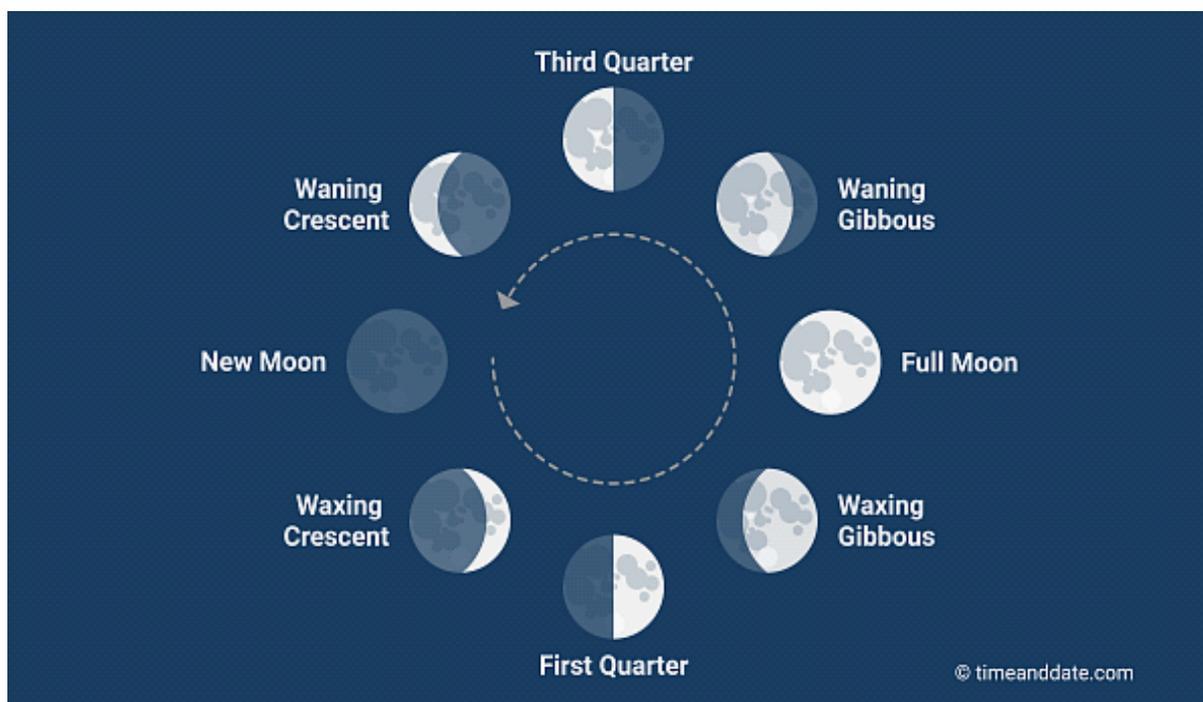


Image Credit:

<https://www.timeanddate.com/astronomy/moon/phases.html>

Isn't it interesting how you can look around and even seemingly simple concepts, like the tide, have a fascinating scientific backstory? Science is all around us, even when you're having fun chasing waves at the beach.



The Sky This Month for September 2025 by Kevin Salwach

Happy September folks, and welcome back. It's back to school and back to reality - summer vacation is over, and short behind it the season as well. I hope you had a good summer and took advantage of some of the stretches of clear skies we got to enjoy all the summer sky offered up. I unfortunately couldn't attend the Perseid night at Binbrook this year, but I got was lucky enough to get some crisp, clear, pitch black skies the weekend before down in Keene Valley, New York as I was climbing some of the Adirondack High Peaks. On the night of Sunday the 3rd from my campsite, in the three hours of darkness I had before I went to sleep, I ended up seeing 137 Perseids - not bad considering it was a week before the peak, there was a low gibbous Moon in the sky, and I only had a view of the zenith and the west. The Adirondacks, though further than Cherry Springs in Pennsylvania, offer up skies just as dark - I would highly suggest it for a nice family road trip and some good observing. I'll be returning in October to climb some more mountains, but this time with a telescope in tow. I'll also be heading out to Southern Labrador next week, and camping in rural Quebec and Labrador along the way until I reach the Atlantic coast just north of Newfoundland. I'm passing through some of the darkest skies on the continent as I go, before camping on the Atlantic shore 30km from the nearest town. Hopefully one or two of the seven nights will be clear, and hopefully I have some nice (cell phone) astrophotos and stories to share once I'm back. I'm looking forward to seeing you all at the AGM in October, but for now let's get into the September sky.

As always, let's start off with the big picture. Your naked eye sky for the middle of the month has the last of the spring constellations finally setting before midnight - at 10PM *Bootes*, *Corona Borealis* and *Hercules* are dropping low to the horizon, with the Big Dipper hugging the northwest horizon nearby, and *Ophiuchus* close towards the southwest. Up at zenith, the summer constellations and Summer Triangle are still on full display - after all, it is still summer. *Cygnus*, *Lyra* and the summer Milky Way arch right overhead, giving you more opportunity to see or photograph any targets you missed out on in July and August. And towards the east, our fall constellations are beginning to pop up earlier and earlier. By 10PM, *Pisces* and *Aquarius* have fully risen, alongside *Pegasus* and *Perseus*. *Cetus* is close behind, and by midnight *Taurus* and some of the winter constellations are making their way up the horizon. (Continued on [page 14](#))



The night sky looking west at 10PM on Monday, September 15 Image generated using Stellarium

The Sky This Month for September 2025 (continued)



The night sky looking towards zenith at 10PM on Monday, September 15



The night sky looking east at 10PM on Monday, September 15 *Images generated using Stellarium*

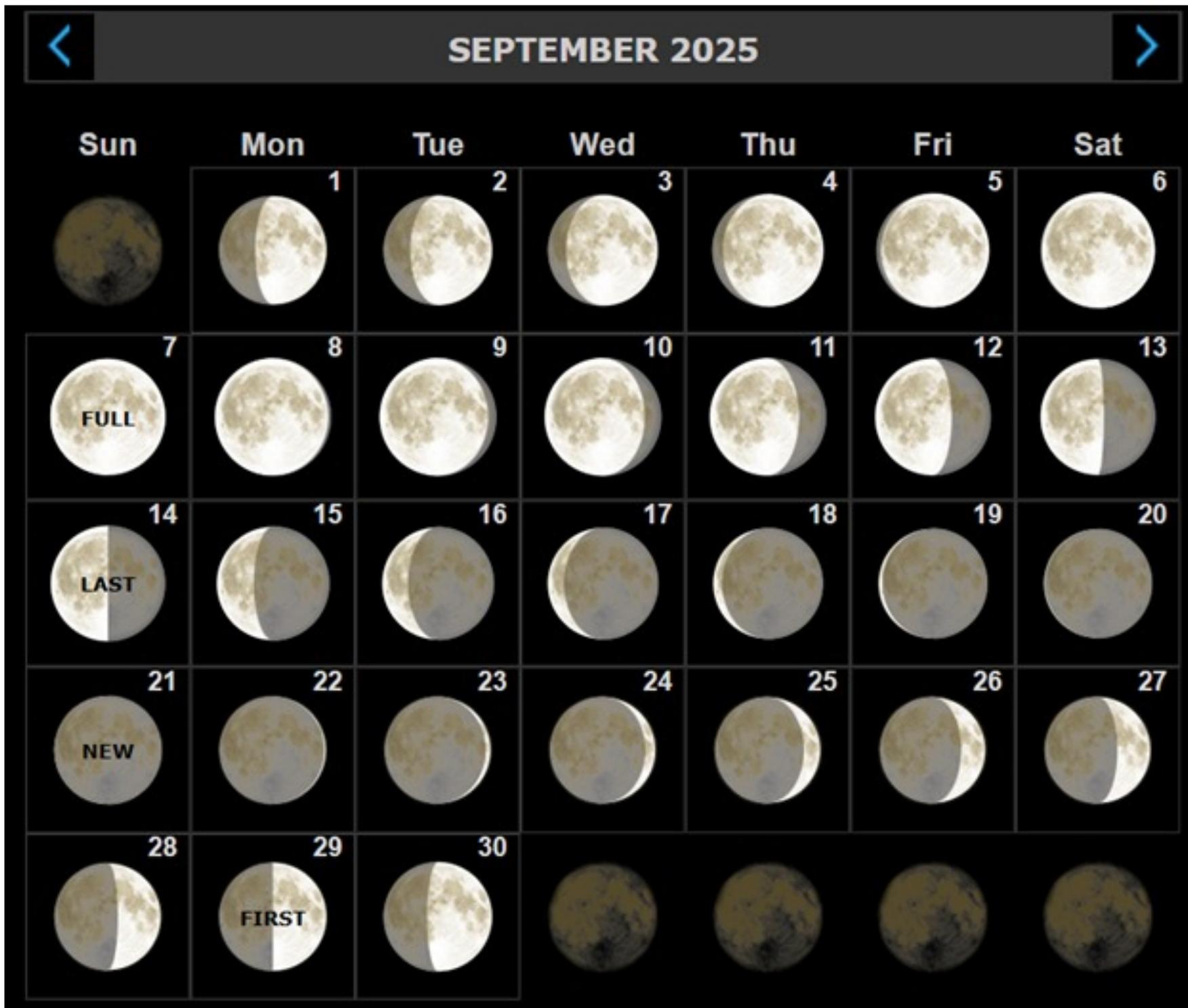
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The Sky This Month for September 2025 (continued)

The Moon

We start off September with a Full Moon on Sunday the 7th, Last Quarter on Sunday the 14th, and New Moon on Sunday the 21st. The weekend of the 19th-21st (our Dark Sky Party) is your best weekend this Month for some dark moonless skies. While observers in the rest of the world get a lunar eclipse, a solar eclipse, and an occultation this month, we here in Ontario unfortunately miss them all - but nonetheless the Moon makes a few passes and conjunctions this month:

- 5 degrees away from Saturn in the evening sky on the 8th (widening overnight)
- 4 degrees away from the Pleiades on the night of the 12th (our meeting night)
- 4 degrees away from Jupiter on the morning of the 16th before sunrise
- !!! On the morning of the 19th before sunrise - the slim crescent Moon forms a compact, 1 degree line with Venus and Regulus (see image at top of next page) - mark your calendars and get up early for this one



(Continued on [page 16](#))



The Moon, Venus and Regulus at 6AM in the eastern sky on the morning of the 19th.

Image generated using Stellarium

The Planets

Now moving on to the planets. **Mercury** this month is only fleetingly visible for an hour before sunrise the first couple days of September, and for less than an hour before sunset the last couple days - unless you're lucky with a perfect horizon, not a good month for observing the most inner planet. **Venus** starts off the month in the early morning sky only 3 degrees away from M44 - The Beehive Cluster - in Cancer the crab. It moves closer to the Sun all month long - joining up with Regulus and the Moon on the 19th but will still be visible for an hour or so before sunrise even by the end of September - a whole month to catch some views of the brightest planet. **Mars** is fleetingly visible just after sunset near Spica in the west from the 13th to about the 21st, though only for an hour or so, and very low. As with Mercury, not a great month for the Red Planet. **Jupiter** on the other hand, has a great month ahead. It is visible in the morning sky in the east all month long, rising earlier and earlier as September progresses. Get up early (or stay up very late) any night of the month to see it with its Galilean Moons slowly moving across Gemini. **Saturn** is the star of the show for September, reaching opposition on the 21st, meaning it is visible all night long. With its rings nearly edge on, you have all night all month to see it with its host of moons as it moves between Cetus and Pisces. **Uranus** is visible in Taurus all month long after about 1AM, while **Neptune** trails only a few degrees behind Saturn all month as well.

(Continued on [page 17](#))

The Sky This Month for September 2025 (continued)

Deep Sky Objects

Finally, on to our deep sky. September gives you opportunity to see deep sky objects in the spring, summer, fall and winter constellations, depending on the time of night. Of course, your summer and fall objects will be most convenient as they will be visible more favorably for more of the night. A few of you suggested I give some challenges for those attending the club's Dark Sky Party at Andromeda Meadow in place of this month's usual deep sky list, so I will do just that.

For starters, September is a great time to try a partial Messier marathon. As with the spring, in autumn our planet's tilt and orbit line up to make favorable conditions for bagging almost the entire Messier list in one night from our latitude. Though not as good as March/April when you can potentially get all 110 objects from the Northeast if you are extremely lucky, you can still see upwards of 90 Messiers this month. Below is a link to an article from a well known amateur astronomer from New England named Ed Ting - in it you can find a convenient list of which Messiers are viewable from New England and which are not - from our latitude a bit further north, you should be able to see between 85-90 Messiers. Try it out and let me know how many you get, as I assume those of you at the star party will be up all night.

[Fall Messier Marathon](#)

As for some challenging objects, since we are heading into the fall, I'll focus on the early fall sky and give you star party goers (and all the rest of you of course!) 5 DSOs to try and spot, ranging from easiest to hardest.

1. *NGC 7293 - The Helix Nebula*

This magnitude 7.6 planetary nebula in Aquarius is a well known fall object, but don't let its brightness deceive you - a very large nebula with low surface brightness, it is easily washed away in less than favorable skies and can easily be missed. A wide field eyepiece and O-III filter really help bring out this giant ring.

2. *NGC 7009 - The Saturn Nebula*

On the opposite end of the spectrum, this magnitude 8.0 planetary nebula on the other side of Aquarius presents a challenge for small and medium scope observers because of its small size - it can easily be mistaken for another star in scopes under 6", and even in an 8" scope without high power it's difficult to see both its nebulosity as well as its two elongated "ring" structures giving it its name. Try using a larger scope and a medium power eyepiece to find the nebula, before cranking up the power to try and spot its "rings".

3. *M76 - The Little Dumbbell*

Yet another planetary nebula, this magnitude 10.1 object is the second dimmest on the entire Messier list. Difficult to spot in a small scope and not easy to star hop to, you'll need dark and clear skies to spot it, and you will need at least an 8" scope, if not bigger, to pick out the faint and diffuse lobe shape that gives it its name.

4. *NGC 7006*

This faint, small magnitude 10.6 globular cluster in Delphinus presents a challenge in most amateur scopes. Although it is "visible" with as small as a 60mm scope, you will need high magnification and a larger aperture to pick out its globular structure. What makes it interesting is its distance - it is located 135,000 light years away in the galactic halo - 5 times the distance of the Sun from the galactic core. It is one of the most distant globulars visible in an amateur scope.

(Continued on [page 18](#))

The Sky This Month for September 2025 (continued)

5. Stephan's Quintet

This famous, but difficult to see cluster of interacting galaxies in Pegasus makes for a great challenge for the star party, and for anyone with some very dark skies and a bit of aperture this time of year. Located less than half a degree away from the fairly easy to find magnitude 9.5 NGC 7331, this grouping of 5 galaxies - NGC 7317, NGC 7318A, NGC 7318B, NGC 7319 and NGC 7320 range from magnitude 13 to 14.6 - very dim and very difficult to spot even in an 8" dob. The brightest member is NGC 7320 - try and find it first, and then with averted vision, see if you can make out the other four faint, fuzzy blobs that make up this infamously challenging cluster.

Let me know how you do, what you saw, and whether you thought this list was way too hard, or a piece of cake! I hope those attending our star party in three weeks have a great time and some clear skies, and I hope all of you have a good month with minimal clouds and maximum views! As always, happy hunting, happy fall, and I'll see you all in October!



LUKASZ 83

29.09.2011
21²⁵ - 21⁴⁰
Jodłowa
NELM 6,4 mag
seeing 2/5

Columbus 320 UL
+ Meade 8,8mm UWA
pow. ~ 150x
FOV ~ 0,55°

Kwintet Stepano
(NGC 7317, NGC 7318A, NGC 7318B, NGC 7319,
NGC 7320, Hickson 32)
Dwa bliźniaki widoczne
nie wprost po 3-4 minutach
adaptacji. Pozostałe dwa
widoczne zerkaniem (ale
oczyniście). Widoczne pojas-
nienie centralne we
wszystkich 4 galaktykach.

Stephan's Quintet in a 12.6" Newtonian courtesy of user "Łukasz"

Astronomy Sketch of the Day.sov/deepskywatch.com

Report from Starfest 2025



Here are two pictures taken by veteran astrophotographer and past H.A.A. member *Kerry-Ann Lecky Hepburn* at Starfest the week of August 21 - 23, 2025.

Kerry Ann's daughter *Alexxa Hepburn* is holding the door prize she won. H.A.A. Member Doug Turner's name was called to choose a young person in the audience to win a door prize at the draw on Saturday evening at Starfest. Alexxa was seated next to Doug and Sue. Doug chose her as the winner. Kerry-Ann took a picture (below) of Sue, Doug, Alexxa and herself.

The other picture at left is of the Milky Way at Starfest that Kerry-Ann took on the Thursday night, August 21.

*Image Credit:
Kerry-Ann Lecky Hepburn (both)*





The Sturgeon Moon over the Vistula River and Wawel Castle in Krakow, Poland, by Chris Szaban



The Sturgeon Moon rising over Binbrook, ON, by Jamal Tariq



above: The Sturgeon Moon near Binbrook, ON, by Jo Ann Salci

Taken with her cell phone at the side of the road.



lower left: The First Quarter Moon, by Paul Gross

Taken with his iPhone 12 through a Celestron 8 inch Edge telescope.



top:

**The Veil Nebula, Eastern Section,
in Cygnus, (NGC 6992/5)**

by Dan Copeland

Taken through a 500mm Canon lens
with a ZWO 533 Pro camera.

bottom:

**The Cocoon Nebula (IC 5146)
in Cygnus**

by Chris Szaban

Taken through Celestron 6SE scope
with an ASI294MC Pro camera, from
Milton, ON.

92 x 180s Optolong Quad + 26 x
180s Ha/OIII; 354 minutes total.





The Dumbbell Nebula (M27) in Vulpecula, by Bob Christmas
Taken with a ZWO Seestar S50 imager from Burlington, ON. 90 x 10s = 15 minutes total.



The Lagoon Nebula (M8) in Sagittarius, by Ken Leedham
Taken with a Celestron Origin imager. 10 minutes total.



The Veil Nebula/Cygnus Loop, in Cygnus, by Chris Szaban

Ha/OIII using NIKKOR ED lens and ASI294MC Pro camera, from Milton, ON. 49 x 180s = 147 minutes total.



William J. McCallion
Planetarium

McMASTER UNIVERSITY, HAMILTON, ONTARIO

- **Public transit available directly to McMaster campus**
- **Tickets \$10 per person; private group shows \$169.50**
- **Upcoming shows:**
 - **Sep 3: Introductory Astronomy for Kids — Solar System**
 - **Sep 10: Moon Madness**
 - **Sep 17: Asteroids, Comets, and the Edge of the Solar System**
 - **Sep 20: Introductory Astronomy for Kids — Constellations**
 - **Sep 24: The Expanse: A Journey into Real Space Colonization**
 - **Sep 30: The Celestial Bear: The Six Nations' Night Sky**
 - **Sep 30: Onekwá:tara – the Seven Dancers of the Pleiades**
 - **Oct 1: Introductory Astronomy for Kids — Galaxies**
 - **Oct 2: Indigenous Astronomy: as told by the Haudenosaunee**
- **For show times and further details, visit**
www.physics.mcmaster.ca/planetarium

UPCOMING EVENTS

September 12, 2025 - 7:30 pm – H.A.A. Meeting at St. Matthew’s Anglican Church. Our guest speaker will be *Dr. Chris Jillings*, Senior Research Scientist at Snolab in Sudbury. **There is the option of attending online via [Zoom](#)**. Past meetings can be viewed on our [YouTube](#) channel.

October 17, 2025 - 7:30 pm – H.A.A. Meeting at St. Matthew’s Anglican Church. This is our Annual General Meeting.

2024-2025 Council

Check out the H.A.A. Website
www.amateurastronomy.org

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All active HAA members have the privilege of access to an exclusive HAA members only dark sky location.

Be on the lookout for e-mails with dark sky observing details. Space is limited.

The Harvey Garden HAA Portable Library



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