

THE EVENT HORIZON



Volume 34, Number 1 / September 2026



FROM THE EDI...

First off, I would like to give a huge thanks to our outgoing Event Horizon editor Bob Christmas, who dutifully managed our club newsletter for almost 13 years. Members old and new have greatly appreciated Bob's work over the years, and he will be greatly missed in the editor role. Thanks Bob!

For the next year, EH duties will be split between myself and Geoff Wozniak, in a manner we haven't quite figured out yet! This month I have taken over, and made a few small adjustments to the look and feel of the EH while keeping the same format we are all familiar with.

That's all from the Editor this month, but if I could direct you over to myself next...

Kevin Salwach, Editor

editor@amateurastronomy.org



...CHAIR

Happy September, and welcome back everyone! I hope you all enjoyed your summer and made the most of it. We had quite a few stretches of clear skies, and quite a few great celestial events over the past two months to enjoy.

Three attempts at sidewalk astronomy were thwarted by rain over three consecutive months, and the fourth tentative date for a public event in July wasn't advertised because well, it also got rained out. Such is the amateur astronomer's life. More on sidewalk astronomy outreach can be found in my Sky This Month article.

Our Binbrook Team however had far more success with the skies, opening up the park several times across June, July and August, allowing club members to get out under some dark(ish) skies and enjoy all that the night sky has to offer.

(continued on page 2)

IN THIS ISSUE

A big thanks to our Binbrook Team for coordinating and organizing park openings!

The HAA's Outreach Director Jo Ann Salci was especially busy this summer, giving 11 presentations from June to August, speaking to over 450 individuals at a diverse group of organizations such as Girl Guides, campgrounds, public libraries, children's summer camps and daycares. Jo Ann's hard work and dedication is invaluable to the club's mission of public education in the astronomy field, and her knowledge and skill connecting with and communicating with individuals from all walks of life has led to countless people across the Hamilton area and beyond gaining a newfound interest in stargazing, astronomy and science. Of course I know Jo Ann would tell me she couldn't do it all herself, and she has a great team of club members helping her out at our many outreach events, speaking with members of the public, setting up and operating telescopes, engaging in children's activities, and answering the many questions raised at any given event. So I would like to extend a huge thank you from all club members to Jo Ann and to all who have volunteered this year with public outreach - one of our club's mission statements is public education in the science of astronomy, and judging by what I have heard from some of the (literally) thousands of people the HAA has spoken to, presented to, and worked with in the last few years, we are living up to that purpose!

Speaking of public education, our Perseid's Night this year was a great success. Despite my worries of a cloudy night, by sunset at 9:00PM on August 8th the skies miraculously cleared for a few hours, giving us a great window of Perseid and telescopic viewing. Over 250 members of the public came out to Binbrook - I suspect it would have been even more had the skies not been fully clouded until literally right at sunset - and enjoyed the night laying back, watching for meteors, looking through club scopes and having their questions answered by knowledgeable HAA members.

Looking towards the fall, we have a great lineup of speakers and events coming up. Our 5th annual Dark Sky Star Party will be held on September 11th at Andromeda Meadow in Warton. Registration is now closed, but as best I could tell by the PayPal notifications, it is going to be a full house that weekend! I unfortunately cannot make it, but I expect to hear all about it at our meeting on the 18th. I'm sure Sue or someone will have a short blurb to add with a bunch of photos for our October EH. Details for our September meeting can be found on the next page. In October, longtime HAA member Les Webb will be speaking to us, followed by member Simon Peng in November giving the yearly calendar presentation, and in December we will have DwarfLab speaking to us about their lineup of smartscopes. At the October meeting we will also be having a "garage sale", where odds and ends, accessories and equipment that the HAA has acquired over the years will be up for sale for a few dollars each. More details on that in next month's newsletter. At the end of the month, we also have another joint event with the Hamilton Naturalists' Club; see details at the bottom of page 27.

(Continued on page 3)

And of course as always, keep an eye out in your emails for park openings from the Binbrook Team whenever the clear skies come. As summer comes to a close, the nights are beginning to get longer and longer, and with them lots of opportunity to take a look up to see what sights the universe has to offer! Remember to renew your membership!

I hope to see you all on the 18th. Until then, clear skies!

Kevin Salwach, Chair

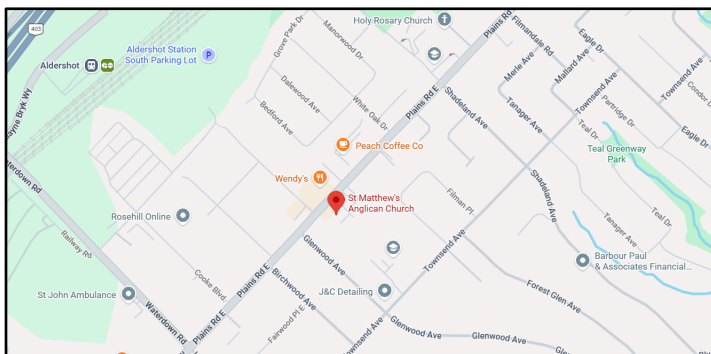
SEPTEMBER MONTHLY MEETING

Our September monthly meeting will be held on September 18th at 7:30PM. Remember this month the meeting will be one week later than usual to accommodate our annual Dark Sky Star Party. Our speaker for this month will be Bray Falls of Starfront Observatories in Texas. Bray will be joining us via Zoom to talk about his exciting work in remote observing at Starfront, and the opportunities it gives for astrophotographers to run their equipment remotely in some of the darkest skies on Earth.

The meeting begins with announcements at 7:30PM sharp, followed by Bray's virtual presentation. Following the conclusion of his talk, we will have a short intermission, followed by door prizes, and then the Sky This Month presentation by Observing Team Director Kevin Salwach.

Our monthly meetings are hosted at St. Matthew's-on-the-Plains Anglican Church in Burlington Ontario, 126 Plains Road East, L7T 2C3. Entrance to the church meeting hall is at the back of the building near the shed. Doors open at 7:00PM and the meeting begins promptly at 7:30. HAA monthly meetings are open to the public free of charge.

Zoom link to meeting will be posted to our website and Facebook page.



St. Matthew's Church is an accessible venue, with accessible parking available close by to the hall entrance.

Our monthly meetings are held on the second Friday of every month from September until June at 7:30PM, in a hybrid format of in-person and online via Zoom.

Masthead Photo: August 28th Partial Lunar Eclipse by Bob Christmas

One ½ second exposure at ISO800, f/4 with a Canon 400D DSLR camera and Tamron 300mm telephoto lens

We are always accepting contributions and submissions for our monthly Event Horizon newsletters. Almost any form of astronomy related content is gladly accepted, such as astrophotos, equipment advertisements for sale (members only), brief articles on a unique astronomy experience, trip, photo, or event, full articles on anything astronomy, astrophysics, or space science related, and anything in between. Email submissions to

editor@amateurastronomy.org



Hunger. It's just unacceptable.

The HAA accepts donations from members and guests for local food banks at each monthly meeting. We accept both non-perishable and cash donations. We greatly value our relationship with food banks in our community, particularly [Hamilton Food Share](#). If you cannot make an in person meeting, please consider donating directly to a local food bank, all help is greatly appreciated!

HAA LOANER SCOPE PROGRAM

The HAA proudly runs a loaner scope program for club members, included in your annual membership dues. Our loaner program allows members who do not have a telescope of their own to borrow a club telescope to begin enjoying the night sky up close and personal, experiment with different types of scopes, and familiarize themselves with new types of scopes, eyepieces and mounts!

The club offers several different telescopes for loan, from beginner to advanced, depending on your level of knowledge and expertise, as well as a wide array of accessories to go with them.

If you are a member and interested in borrowing one of our telescopes, please contact Jeff Parsons at:

loanerscope@amateurastronomy.org

Telescopes are loaned out on a first come, first serve basis. More information can be found on our website:

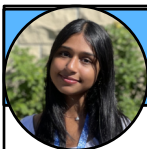
<https://amateurastronomy.org/telescope-loaner-program>



Check out the HAA website: <https://amateurastronomy.org>



General information: secretary@amateurastronomy.org
Membership information: membership@amateurastronomy.org
Education information: education@amateurastronomy.org



When we have conversations about space, we usually talk about the size of celestial bodies. Most people have a vague idea of how large the Sun is compared to the Earth, or how Pluto is “too small” to be considered a planet. You may have even heard that the universe is constantly expanding or getting larger. However, it is difficult to understand exactly how large celestial bodies are and, as a result, picture our place in the cosmos. Today, let's explore the size of space!

The Earth

Earth has an average diameter of about 7,918 miles (12,742 kilometers). To bridge the entire diameter of our world, you would have to align approximately 7.5 million humans from head to foot. The distance around the outside edge of Earth (circumference) is about 40,075 kilometers (24,901 miles). If you walked eight hours every day, it would take you nearly three years to walk all the way around the world. Compared to us, the Earth is very large, but what about compared to the rest of the solar system?

Our Solar System and Sun

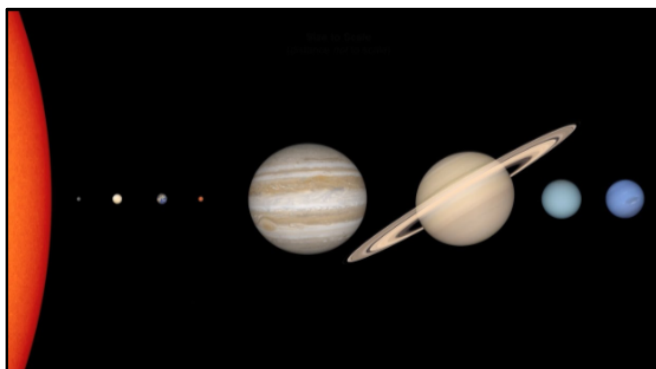
Earth is the fifth-largest planet in our solar system and is the largest of the rocky, inner planets. However, it is much smaller than the outer gas and ice giants. Jupiter, the largest planet, is 11 times wider than Earth, and you could fit about 1,300 Earths inside it. Saturn is large enough to hold roughly 830 Earths. The Sun, on the other hand, has a diameter that is 109 times wider than Earth's. The Sun is massive and holds 99.86% of all the mass in the solar system. You could fit about 1.3 million Earths inside the Sun.

Other Stars

Our Sun is an average-sized star compared to others in the universe, meaning it is larger than many small stars but much smaller than giant and supergiant stars. Red dwarfs, the most common stars in our galaxy, are much cooler and smaller than our Sun, sometimes measuring only 10% to 50% of the Sun's size. White dwarfs are the dense leftover cores of dead stars. They can be as small as Earth while holding a mass similar to the Sun. There are also massive supergiants, such as Rigel, a bright blue supergiant that is roughly 79 times wider than the Sun, or Betelgeuse, a red supergiant that is about 700 to 900 times larger than the Sun. If Betelgeuse replaced our Sun, it would reach past the orbit of Jupiter.

(continued on page 7)

Credit:
NASA/JPL



Imagining Distances

Size isn't the only difficult thing to imagine—it might be difficult to grasp the distances between celestial bodies as well. Space is incredibly spread out! The Moon is about 384,000 kilometers away from Earth, while the Sun is about 150 million kilometers away. Even though the Sun is much farther away, sunlight travels so quickly that it reaches Earth in just about 8 minutes. But what happens when we travel beyond our Solar System? The distances become so enormous that kilometers become difficult to use. Instead, astronomers use light-years, which measure how far light travels in one year. One light-year is about 9.46 trillion kilometers. The closest star system to our Sun, Alpha Centauri, is more than four light-years away.

Is there an end to space?

Does space eventually stop? That's a question scientists are still trying to answer. We know that the universe is expanding, meaning that the distances between many galaxies are increasing over time. Imagine putting dots on a balloon and then blowing it up. The dots move farther apart as the balloon expands. The balloon isn't expanding into a bigger part of its surface; the surface itself is stretching. The universe is a little more complicated than a balloon, but this analogy helps us picture its expansion. We can only observe the part of the universe whose light has had enough time to reach us, called the observable universe. Beyond that, there may be much more that we simply cannot see.

Conclusion

When we look at the night sky, it can be easy to think of Earth as the center of everything. But zoom out, and our planet becomes just one tiny world orbiting one ordinary star. That star is one of billions in the Milky Way, and the Milky Way is just one of billions of galaxies in the observable universe. From Earth to the Moon, from the Sun to distant stars, and from our galaxy to the farthest galaxies we can observe, the scale of space is almost impossible to imagine. Yet somehow, from our tiny corner of the universe, humans have learned to measure these enormous distances and study objects billions of light-years away. Try to ask yourself this question: what do you think is the biggest thing we could ever discover?

Here are some helpful websites to see how big the universe is!

<https://scaleofuniverse.com/en>

<https://neal.fun/size-of-space/>

<https://www.jpl.nasa.gov/edu/resources/video/solar-system-size-and-distance/>

Imaged from my Bortle 7 Hamilton backyard over multiple nights with my trusty Dwarf 3 smart telescope, this often overlooked nebula in Cassiopeia was created from massive stellar formations in a dense molecular cloud. Their powerful stellar winds carved out the "claws" and dust lanes.

This Lobster Claw image contains three surprises. Two objects lie inside the nebula, and the third is in the background. They are **Markarian 50**, **SH-2 157a**, and **NGC 7510**.

First, **Markarian 50**. It is a very young star cluster born inside the nebula. Zoomed in, you can see the Wolf-Rayet star *WH 157* at the center of the cluster. It appears to touch the lower edge of the orange halo of its much larger binary partner *HD 219460 B*. Orbiting each other every 2 days, both are currently about 20 solar masses, but as Wolf-Rayet stars do, *WH 157* has been blasting off its mass throughout its life - currently at a speed of over 1,000 kps. It evolved from being the dominant star in the pair with a mass of 30 solar masses or more, to shedding much of its mass, and even giving some mass to its partner. Once much bigger in mass and volume, *WH 157* has now become a compact core of only 2-3 solar radii compared to its companion at 10-15 solar radii.

Second, **SH 2-157a**. What looks like a separate planetary nebula is actually an ultra dense star forming region of young stars inside the Lobster Claw. It's greater density makes it much brighter than the surrounding nebula.

Third, **NGC 7510 - the Arrowhead Star Cluster**. A background object, this young tight star cluster is packed with about 60 to 100 stars averaging only 0.5 to 1.5 light years in separation. Hidden gems!

(pictures continued on page 9)



SH 2-157 - THE LOBSTER CLAW NEBULA WITH PERKS (continued)



Markarian 50



NGC 7510



SH 2-157a

See the Focal Point section for Jeff's full, unlabeled photo of SH 2-157



THROUGH THE LOOKING GLASS

GREG EMERY

It has definitely been a minute since I last wrote an article for the EH. It is not because I have lacked for an opinion or anything to say. Life simply got in the way. I've been with the HAA since 2001. I'm a night owl, but my wife isn't. She likes astronomy, but can't stay up late and has an aversion to long, cold, dark nights. But we definitely share a passion for eclipses, lunar or solar.

We saw our first total solar eclipse together on Aug 21, 2017 at a motel in Bowling Green, Kentucky. We were then blessed in April 8, 2024 when a hole in the clouds opened up over our backyard and we had a clear view of totality. That was special as our kids and grandkids were there to share it with us. Within a week of that eclipse, my wife had found a cruise that would be in port at A Coruna, Spain for the total solar eclipse of Aug.12, 2026, which happened to be my birthday. We wanted to see the eclipse, and we had never been on a cruise. This summer was also our 30th wedding anniversary so needless to say, we *had* to go.

The cruise departed from Southampton, England on the Cunard Queen Anne. It's a luxury line and I think we have set the bar pretty high for any future cruises.

(continued on page 10)

THROUGH THE LOOKING GLASS *(continued)* GREG EMERY

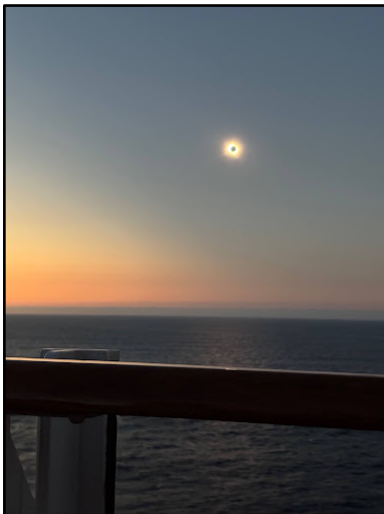
Plans were to be in the Spanish port for the eclipse. Enough people complained about this, and the astronomer that Cunard hired to be an advisor on the cruise (now there is a good gig - free cruise, give a few public lectures and see the eclipse) most likely agreed that being tied in port was not optimal. We left port early and were well off the coast before the first point of contact. Having seen two total solar eclipses I was prepared, or so I thought, for the main event.

The eclipse, up until 95% coverage, seemed to proceed according to others I had seen. Before the deck got too crowded I made sure to wave the flag for the HAA. The image below is me sporting the HAA eclipse glasses.

I, unfortunately, was not able to get pictures of everything during totality - a minute and a half goes by quickly once you factor in just looking and enjoying the eclipse.

As totality approached, a few things I noticed that I had not seen on previous eclipses was the shadow of the eclipse underneath the sun descending straight down to the horizon. It was very noticeable with the naked eye.

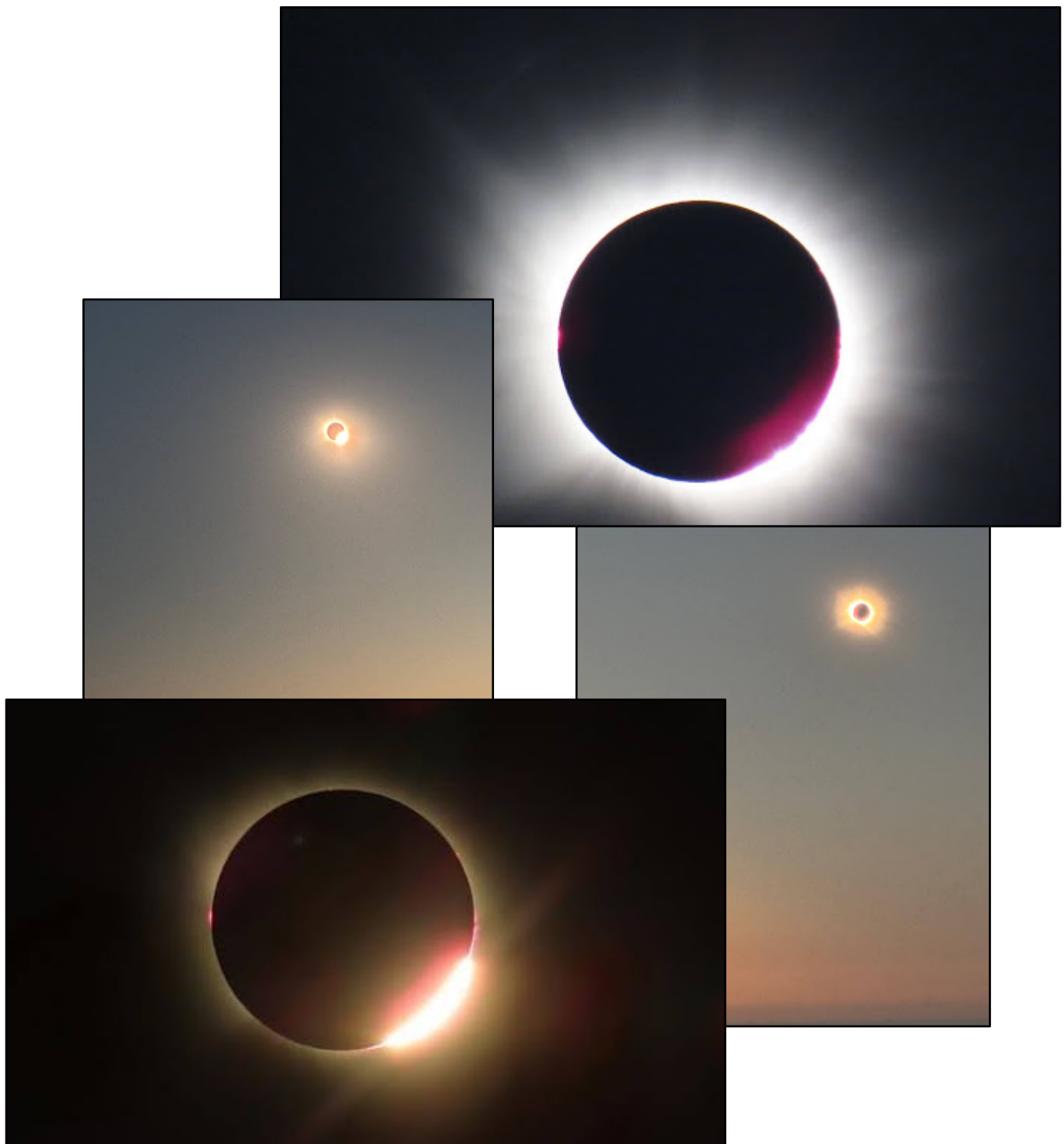
Darkness did not cover the entire sky like the previous eclipses we had seen. The sky to the north and south of the eclipse path was quite bright orange/pink. I guess that this may be the extensive line of sight offered while at sea. With nothing to hinder the view, I believe that we were actually looking beyond the band of totality into the areas which only had a partial eclipse. If I am wrong about this, please do not correct me. For a brief few minutes on the ship I actually sounded like I knew what I was talking about, at least let me keep that!



The corona was beautiful, the images here, taken with an iPhone 15 using optical zoom, do not do it justice. The image to the left shows the corona and also the bright orange sky to the south of the eclipse path. This was just before the end of totality. The bottom left image (see next page) is the diamond ring as totality ends.

(continued on page 11)

The final two pictures (courtesy of a fellow ship passenger with a much better camera!) show more detail of this amazing phenomenon. So that is our eclipse experience in a brief synopsis. With luck, there may be another EH article from me next September - we plan to travel to Luxor, Egypt in 2027 for the 'eclipse of the century'. That will give me a full six minutes of totality - enough time I hope to utilize for some great observations.

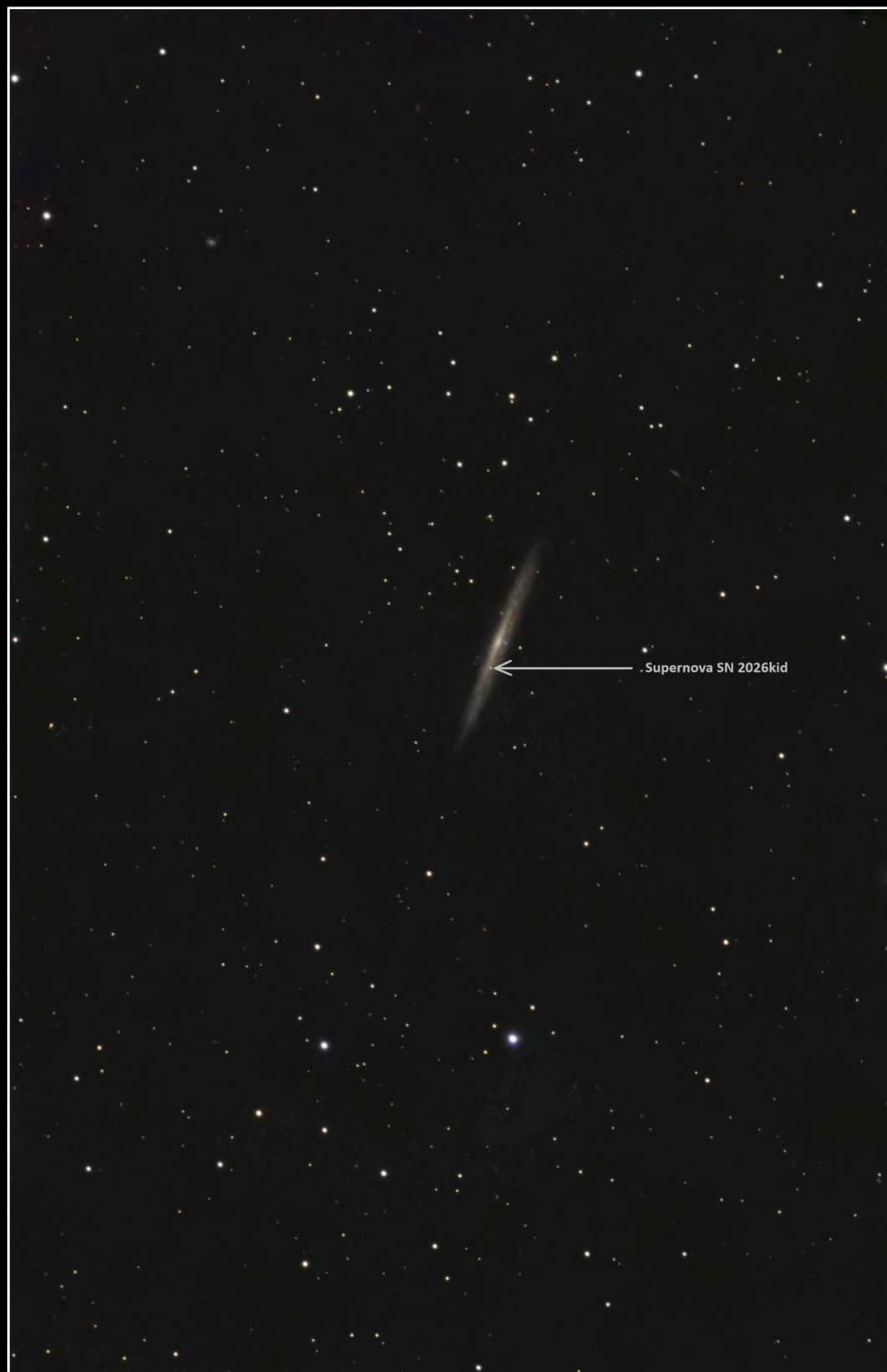




SH 2-157 by Jeff Parsons
Taken with a Dwarf 3



August 12th Solar Eclipse by Chris White
Canon T7i handheld 1/30th second exposure with a 150-600 lens



NGC 5907 - The Splinter Galaxy by Bob Christmas

Capture of the galaxy and extra-galactic supernova SN2026kid
1 hour of 10 second exposures stacked in device on Seestar S50 in EQ mode



Comet 220P McNaught, August 21st 2028 by Bob Christmas

20 minutes of 10 second exposures stacked in device on Seestar S50 in AltAz mode



M81 and M82 by Bob Christmas

1 hour of 10 second exposures stacked in device on Seestar S50 in EQ mode



August 28th Lunar Eclipse by Jillian Salwach (left) and Kevin Salwach (right)
Both photos taken with phone cameras (iPhone 16 & Samsung S25 Ultra) through the eyepiece of one of the club's 8" SkyWatchers



August 28th Lunar Eclipse by Bob Christmas
Single exposure through Seestar S50 in Lunar Mode



Sunset at Binbrook Conservation Area by Kevin Salwach

Taken on Perseids Night 2026 with Samsung S25 Ultra



Milky Way Over Monongahela National Forest by Kevin Salwach
30 second exposure in Expert Pro Mode on Samsung S25 Ultra, taken July 3rd



THE SKY THIS MONTH

KEVIN SALWACH

Welcome back everyone. In just a few short weeks we'll be officially leaving summer behind and heading straight into fall, and coming with it those cooler, longer nights, autumn skies, and an opportunity to see both summer and winter objects at a reasonable hour in the same night.

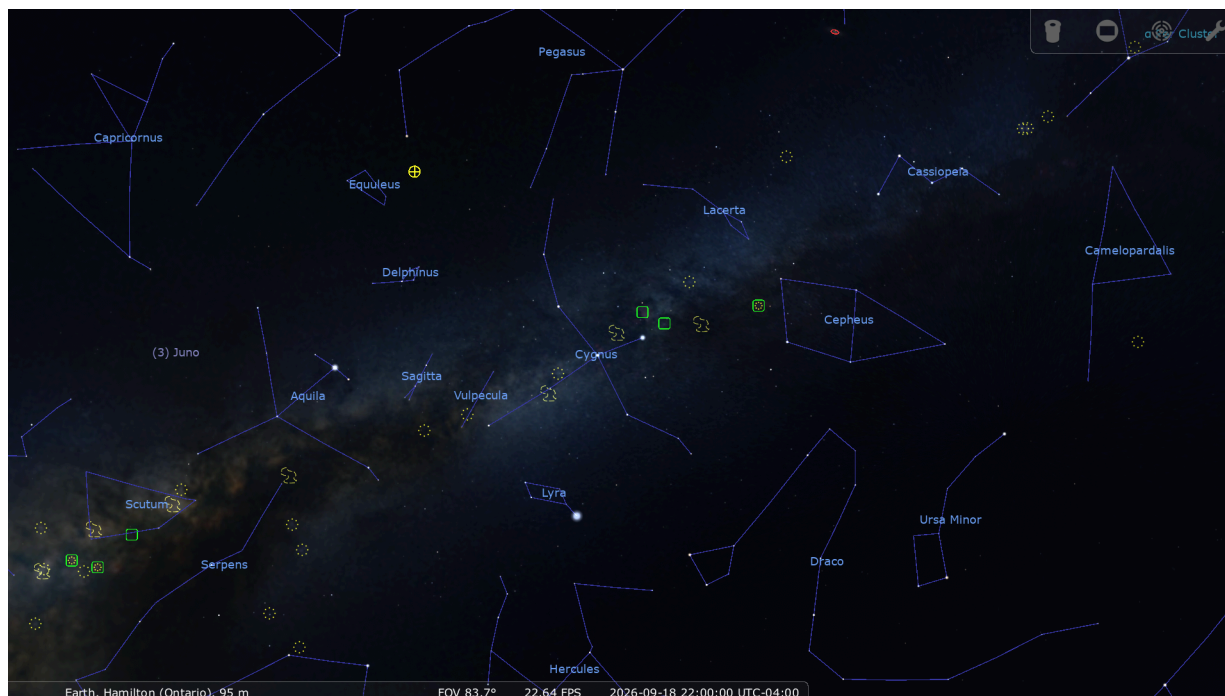
Before we get into the sky for September, I would like to thank Robert Smoke, Gary Sutton and Matteo Statti, who all volunteered earlier this year to be a part of the Public Observing Team. We tried scheduled public nights three months in a row in the spring and early summer, and each night ended up getting canceled due to rain. In July and August, I had slated off a Saturday each month to try and do some observing at Bayfront Park, but did not end up advertising due to fear of having to cancel yet again...and sure enough both nights came with rainstorms, making us 0 for 5 this year when it comes to clear nights for sidewalk observing. September is already booked up with our Star Party, monthly meeting, and Hamilton Naturalists' Club event, so I want to try one last public observing night for October, on Friday the 23rd at Bayfront. As it happens, the next night is our rain check date for the Hamilton Naturalists' Event, so we could potentially be out back to back that weekend. Hopefully the skies are clear one of those two nights. Otherwise, I will be trying some impromptu sidewalk astronomy whenever I'm free and whenever the skies are clear. I know some of you do the same, so if you are interested and want to do some "unofficial" sidewalk observing, email me at observing@amateurastronomy.org so I can get some HAA business cards into your hands to give out. As always, here's hoping for some clear skies and some opportunities this fall to show off the night sky to someone new!

Now let's get into the sky for this month. As per usual, we'll start off with the naked eye sky. Looking west at 10:00PM on our meeting night, September 18th, the late spring constellations are beginning to set, followed by a couple summer ones as well. **Canes Venatici**, **Bootes**, **Coma Bernices** and **Serpens** all drop down near the horizon and are gone by 1:00AM. Looking up towards zenith, **Cygnus** dominates the overhead sky as it does for many months – being directly above us with the summer Milky Way still arching across the whole sky. Around it **Lyra**, **Pegasus**, **Andromeda**, **Cepheus** and **Aquila** are all still well placed for picking out their many famous deep sky objects. Over in the east, autumn is beginning to show, with the fall constellations **Pisces** and **Aquarius** fully risen by 10:00PM, and **Cetus**, as well as the early winter constellations **Taurus** and **Auriga** following close behind. To the south, the end of September is your last chance to see the galactic core in **Sagittarius**, **Scutum** and **Ophiuchus** before they set around midnight, while in the north **Ursa Major** swings low along the horizon under the North Pole.

(continued on page 19)



The night sky looking west at 10:00PM on Friday, September 18th



The night sky looking to zenith at 10:00PM on Friday, September 18th

(continued on page 20)



The night sky looking east at 10:00PM on Friday, September 18th

Images generated using Stellarium

The Moon

September starts off with Last Quarter Moon on the 4th, New Moon on the 11th, First Quarter on the 18th and Full Moon on the 26th. The 7th-14th, with the weekend of the 12th is your best slot for some moonless observing this September.

Lunar events of note this month include:

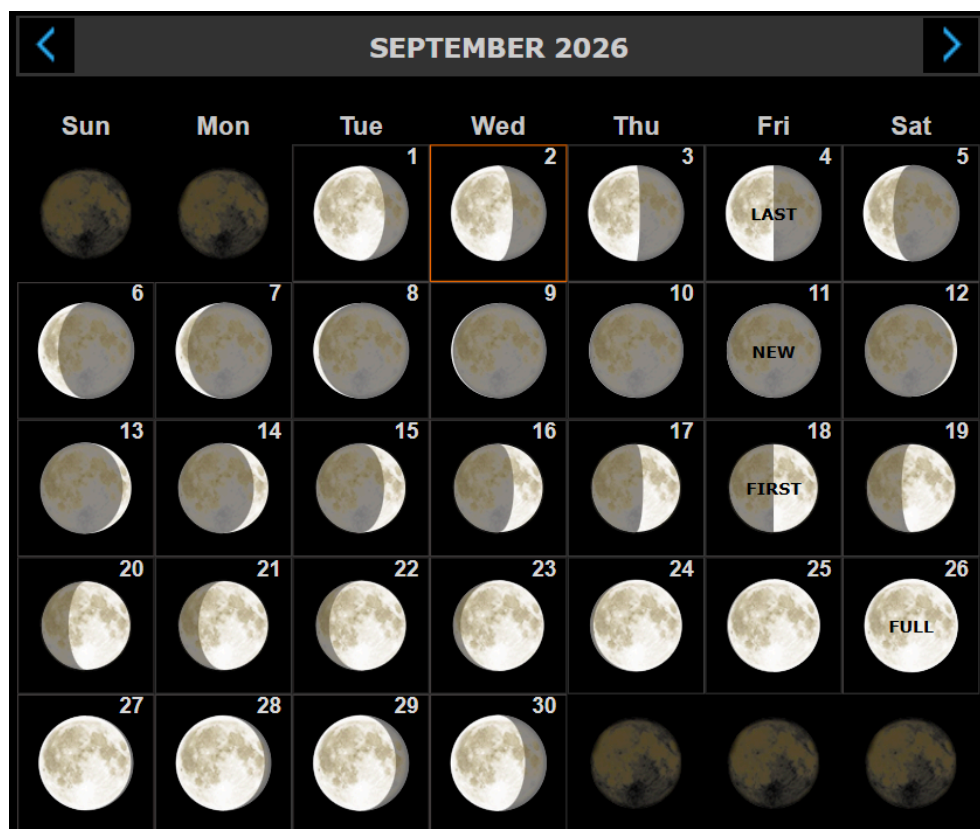
- An extremely close conjunction with M45 the Pleiades in the early morning of the 3rd around 5:00AM
- A close conjunction of about a degree between Jupiter and M44 on the morning of the 8th around 6:00AM
- A few degrees away from Venus in the evening twilight sky on the 14th
- A couple degrees away from Saturn and Neptune in the evening on the 26th

(continued on page 21)



The Moon and M44 at 5:00AM on September 3rd

Image generated using Stellarium



The Planets

Moving on to our planets, **Mercury** starts off very close to the Sun, before pushing away during the last half of the month. That being said, it doesn't push too far, and will still almost certainly be caught in the Sun's glare before setting less than an hour after sunset. Not much opportunity for the inner planet this month. **Venus** begins the month low in the southwest sky at dusk, having stolen the show all summer long. For the first two weeks of September you can still see the brightest planet low on the western horizon just after sunset for an hour, but by the end of the month she has begun to set with the Sun, and won't be visible again until the early morning at the beginning of November. Moving out to **Mars**, the red planet begins September as either a very late night or early morning object depending on your schedule, rising around 2:00AM. By 5:00AM in the middle of the month, with the skies still mostly dark, Mars will be about 35 degrees up the eastern horizon, rising earlier and earlier and getting higher and higher as we come towards October, as it moves from Gemini into Cancer. Although visibility wise there is plenty of time to see Mars leading up to its February opposition, this year's showing is mediocre at best, as it is an aphelic opposition – meaning Mars will be about as far from the Sun as possible when it meets up with Earth, resulting in a not-so-great magnitude and disk size when viewed from Earth. Nonetheless, big aperture and steady skies might still pull features off the planet, so it's always worth a shot. **Jupiter** is also a morning object, rising in the east around 5:00AM at the start of September. By the end of the month it is rising by 3:00AM, and as the Sun comes up will be placed nearly 40 degrees up in the east. As always Jupiter is big and bright, and its Galilean Moons change by the hour, so keep an eye out for transits of the moons and their shadows over the face of the King of Planets. **Saturn** is making its way towards opposition at the start of October, meaning all month long this month you have it for pretty well the entire night. Rising around 9:00PM on September 1st and staying up until sunrise, by October Saturn rises as the sun set. You have the whole night to view its widening rings and myriad of moons as it stands high in the sky in Pisces. **Uranus** is an early morning object in Taurus all month long between the Pleiades and Hyades, while **Neptune** reaches opposition on September 26th so you have all night all month to view the furthest planet from the Sun in Pisces near Saturn.

(continued on page 22)

The Deep Sky

Finally, heading into the deep sky, this month we'll focus on some of the shoulder season constellations around Andromeda that are well placed high in the eastern sky towards the end of September.

Beginner Objects

M31 The Andromeda Galaxy – Mag. 3.4 – the brightest and biggest galaxy in the night sky, and closest major galaxy to Earth, the Andromeda Galaxy is visible to the naked eye off the butt end of the square in Pegasus. Easy to find and easy to see, through any equipment from binoculars to a large dob you will be able to see this oblique spiral galaxy with its two companions M32 and M110 right next to it.

NGC 869/884 The Double Cluster – Mag 3.8 – another bright naked eye object, located halfway between the top of Perseus and the “W” of Cassiopeia, this pairing of big bright open clusters is an absolute gem through a small scope, with dozens of bright, colorful stars flooding the field of view.

M33 The Triangulum Galaxy – Mag. 5.7 – technically a naked eye galaxy, M33 can only really been seen without binoculars in extremely dark skies. With lower surface brightness than Andromeda, it can be difficult to initially spot, but once you do this spiral fills the field of view in binos or a small scope, and in larger apertures its spiral structure becomes clearer and clearer the bigger you go.

Intermediate Objects

NGC 7662 The Blue Snowball – Mag. 8.3 – this small, compact planetary nebula in Andromeda lives up to its name in a medium to large scope. Quite stellar in appearance initially, after cranking up the magnification, its blue color suddenly pops into view, and with a larger scope you may see hints of its core and outer ring.

M74 – Mag 9.4 – This Messier galaxy is a wonderful face on spiral in Pisces. Sometimes tricky to pick out in light polluted skies, it is noticeable as a big, fuzzy object in small scopes, and once you get to the 8-10' inch range, its spiral arms begin to show with increasing clarity.

(continued on page 24)

NGC 7000 The North America Nebula – Mag. 4.0 – Despite its bright magnitude, this huge HII nebula just off of Deneb in Cygnus is deceptively difficult, and is oftentimes a challenge to get worthwhile telescopic views of. Visible to the naked eye as a bright patch in the Milky Way, and in binoculars as a vaguely shaped nebulous region, its namesake shape shows up best in astrophotos. With a small or medium sized scope, you will need very dark skies, and a low power wide angle eyepiece to pick out the bright and dark regions which create its celestial “Mexico” and “Florida”.

Advanced Objects

NGC 404 Mirach's Ghost – Mag. 11.7 – the most difficult object on this list, this tiny lenticular dwarf galaxy sits only 7 arcminutes from Mirach in Andromeda, meaning without very intentional placement and high magnification, it will be overwhelmed by the light of the star. In a larger scope, use an 8-12mm eyepiece and slowly and methodically place Mirach just outside your field of view. Using averted vision, hopefully you can see this tiny faint fuzzy pop into view.

NGC 1491 The Fossil Footprint Nebula – Mag. 8.5 – don't let the magnitude fool you, this is another low surface brightness nebula that presents a great challenge. Use an 8" or larger scope with an O-III filter under the darkest skies you can get to see this diffuse, smudgy faint fuzzy circling around an 11th magnitude star.

NGC 891 The Silver Sliver Galaxy – Mag. 10.1 – This edge on spiral is a challenge for a lot of observers – it is relatively small, difficult to star hop to, and can get easily washed out by bright skies or bad transparency. In a larger scope or at high magnification however, with steady dark skies, you will see its needle like shape contrasted against the black background of the sky, and after a little bit of mental trickery and averted vision, you might just see its bisecting dust lane pop into view splitting the galaxy and its core in half.

Challenge Object – NGC 1579 “The Northern Trifid”

A well-known photographic object, this HII nebula in Perseus presents another big challenge for visual observers. As always, you will need dark skies, and a large scope to pick it out. At magnitude 8.5 it is also low surface brightness. As it is mainly a reflection nebula, filters will not work on this one – high magnification and big apertures will do the trick. In an 8" scope it appears only as a faint fuzzy. With a 12" scope or larger however, you can begin to pick out the trisecting dark lane in its heart which give it its name, as well as wispy details running from the core outwards.

Happy observing, clear skies, I'll see you all in October!

EVENT GALLERY

HAA Annual Perseids Night

August 8th 2026, Binbrook Conservation Area



Pine Valley Outreach

August 28th 2026, Pine Valley Campground

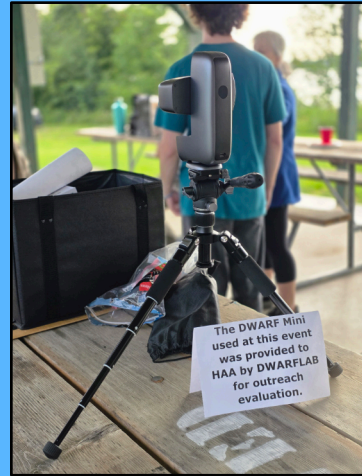


DWARFLAB

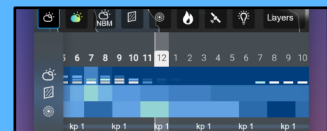
The HAA is proud to partner with DwarfLab, one of the frontrunners in the smart telescope revolution currently taking over the stargazing scene. DwarfLab has generously gifted the HAA one of their Dwarf mini Smart Telescopes for club use furthering our mission of public outreach and education in the astronomy field.

DwarfLab's smart telescopes are ultra-portable, app-controlled telescopes which fully integrate and automate astrophotography into one small package, allowing even the most novice hobbyist to start capturing stunning views of the universe, from shots of the Moon and planets to 4K deep sky images of nebulae and galaxies, eliminating much of the complexity in traditional astrophotography and allowing raw beginners sitting under light polluted skies a glimpse of the cosmos. HAA members enjoy a 6% discount on DwarfLab products through their club membership.

<https://www.dwarflab.com>



The HAA is proud to partner with Astrospheric, the premier weather forecasting app tailored specifically for astronomers and astrophotographers. Available on iOS, Android and web browsers, Astrospheric moves beyond standard forecasting to give data rich, hyper-local hour by hour breakdowns of sky conditions to allow for advanced weather prediction, giving stargazers all the weather and sky information they need to plan their next observing session. HAA members enjoy free mobile access to the AstroLite version of Astrospheric through their club membership.



UPCOMING EVENTS

September 11th-13th – Annual Dark Sky Star Party at Andromeda Meadow in Warton.
Registration closed.

September 18th, 7:30PM – September monthly meeting at St. Matthew's Church in Burlington.

Speaker: Bray Falls of Starfront Observatories

September 26th, 6:00PM – Outreach with Hamilton Naturalists' Club at Bayfront Park.

Details here: <https://hamiltonnature.org/event/bayfront-birding-and-sky-gazing/>

October 9th, 7:30PM – October monthly meeting at St. Matthew's Church in Burlington.

Speaker: Les Webb. Member's Equipment Garage Sale before meeting.

October 23rd, 9:00PM – Public Observing at Bayfront Park

October 24th, 6:00PM – Rain date for Hamilton Naturalists' Club Event, Bayfront Park

November 13th, 7:30PM – November monthly meeting at St. Matthew's Church in Burlington.

Speaker: Simon Peng

December 11th, 7:30PM – December monthly meeting and Christmas Social at St. Matthew's Church in Burlington.

Speaker: DwarfLab (TBA)

VOLUNTEERS NEEDED!

We are looking for club members to volunteer for our event with the Hamilton Naturalists' Club at Bayfront Park on Saturday, September 26th. This joint event features birdwatching in the park, followed by public observing after sunset. The event runs from 6:00-9:00PM. We need volunteers to bring and set up their telescopes for members of the public to take a look through as part of the outreach activities.

If you are interested in helping out, please contact Jo Ann Salci at:

education@amateurastronomy.org

HARVEY GARDEN MEMORIAL LIBRARY

The Harvey Garden Memorial Library is the HAA's collection of astronomy related books available for membership to borrow at monthly meetings. If you wish to help run the library, or donate to it, please contact Melanie Lebel at:

library@amateurastronomy.org

2026-2027 COUNCIL

Chair: Kevin Salwach

chair@amateurastronomy.org

Secretary: John Gauvreau

secretary@amateurastronomy.org

Treasurer: Geoff Wozniak

treasurer@amateurastronomy.org

Second Chair: Chris Szaban

secondchair@amateurastronomy.org

Membership Director: Melanie Lebel

membership@amateurastronomy.org

Communications Team Director: Paula Owen

webmaster@amateurastronomy.org

Member's Services Team Director: Vacant

Observing Team Director: Kevin Salwach

observing@amateurastronomy.org

Education Team Director: Jo Ann Salci

education@amateurastronomy.org

INQUIRIES AND CONTACT INFORMATION

Please direct general inquiries to:

secretary@amateurastronomy.org

Inquiries regarding meetings, partnerships and donations can be sent to:

chair@amateurastronomy.org

Inquiries regarding membership and membership dues can be sent to:

membership@amateurastronomy.org

HAA Mailing Information:

Hamilton Amateur Astronomers

PO Box 65578 Dundas, ON L9H 6Y6

KEEP AN EYE OUT IN YOUR EMAILS FOR BINBROOK PARK OPENINGS AND CLUB NEWS. CLEAR SKIES!