

From The Editor | Chair's Report by Sue MacLachlan

Welcome to the February 2025 Event Horizon Newsletter!

We're over the hump of mid-winter, and hopefully, milder temperatures are coming soon!

**Clear Skies!** 

Bob Christmas, Editor

editor 'AT' amateurastronomy.org

#### IN THIS ISSUE:

- Announcements
- HAA Book Lending Library Policy
- The Sky This Month for February 2025

Welcome to February. The weather has been cold of late but the days are getting noticeably longer. A few of the cold nights have been very clear and I hope that you have had the opportunity to see Venus, Jupiter, Mars and the Moon over the last month even if, like me, it has been through the window. Here's to clear skies for the rest of February!

Volume 32, Number 4 February 2025

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Just so you know, Council has created a new library borrowing policy that you can find below in this newsletter. If you have any questions, please don't hesitate to contact Melanie Lebel at library@amateurastronomy.org. Melanie would be more than happy to discuss our Library with you. Also, Council is still looking for anyone who might be interested in working on the development of a code of conduct. If you are interested or have questions about this please contact me at chair@amateurastronomy.org. Elsewhere, in other Council news, Mel Lebel, Matthew Mannering and I are continuing to work on the inventory and we are pleased to report that we are very close to completing the work. These efforts should allow the club to get the Loaner Scope program up and running in time for the Spring observing season. *(Continued on page 2)* 

NASA Night Sky Notes

- Eye Candy
- Upcoming McCallion Planetarium Shows
- Upcoming Events
- Contact Information

## Chair's Report (continued)

The trip to the Canadensis Lunar Rover Testing Laboratory in Stratford, Ontario is set to go Friday March 28th. This field trip has proven to be a very popular event with the available spaces filling up quickly. So, please, If you have registered for the trip but will not be able to make it, let Jo Ann Salci know as soon as possible. Jo Ann can be contacted at education@amateurastronomy.org. There are a lot of people on the waiting list so please be considerate of other club members who might be hoping for one of the coveted spots in Stratford.

I am really excited about the new content we are creating for the Hamilton Amateur Astronomers' YouTube Channel. <u>Talking Telescopes</u> is an initiative that Chris Szaban, Council Member at Large is spearheading. I encourage everyone to check out the very first episode of Talking Telescopes where Chris examines a "FrankenScope." It really isn't as scary as it sounds.

Please consider helping Chris with this project. For each segment, Chris will be interviewing a member or two about their telescope gear. The interviews will be short, low key and aimed at highlighting some different aspects of scope and mount types. If you would like to help contact Chris at talkingtelescopes@amateurastronomy.org and set up a time to bring in your gear to a Friday night meeting. Chris can video you talking about how you set up your equipment and use it to view and/or photograph the night sky. Our goal is to showcase all of the different types of equipment and the enormous wealth of knowledge that our members have.

Our next Telescope Clinic will be held on Saturday March 8th at the Valley Park Library. Club members are welcome to come at 12:00 noon to set up. The doors open to the public from 1:00 pm to 4:00 pm so please pass the information on to anyone who you know might be interested.

Club members are welcome and encouraged to bring their gear. But, If you don't want to bring gear and would prefer to just help other people set up their telescopes that is just fine too. Given the number of people at the last telescope clinic, we could also use a couple of people to be greeters at the door directing traffic. Jo Ann Salci is going to have a hands-on activity for the kids so Jo Ann could use help with that as well. Thank you so much, in advance, for any help or support that you can give on March 8th.

Sticking with public outreach, on the evening of Saturday April 5 our club will be at Bayfront Park in Hamilton to do sidewalk astronomy. Club members can set up anytime after 6:30 pm. The public will be welcome to look through telescopes from 7:30 pm to 10:00 (ish) pm. We are looking for club members to bring their gear and share views with the public. Of course, this is a weather permitting event.

On Saturday May 5, International Astronomy Day, the club will hold a sidewalk astronomy event during the day for solar viewing. The public will be welcome to look through the telescopes from 1:00 pm to 4:00 pm. The location is yet to be determined. Club members are encouraged to bring their solar telescopes and share views of the Sun with the public. Stay tuned for more information about this event. Again, this is a weather permitting event.

Looking even further ahead, the Annual HAA Picnic and public Perseid night will be held on Saturday August 9th. Like last year, the picnic will be a potluck affair and the park will remain open to the public for an evening of viewing. Unfortunately, there is a full moon that weekend so it will be a poor evening for

(Continued on <u>page 3</u>)

**Masthead Photo:** Orion's Sword, including the Orion (M42) and Running Man Nebulas, by Chris Szaban.

Imaged in both Broadband and Narrowband (Ha/OIII) for a total of 3 hours of integration time. This was imaged using a NIKOR 300F ED lens and ZWO ASI294MC Pro camera from Milton, ON.

## Chair's Report (continued)

looking for meteors but there are always other things for the public to see in the night sky. Stay tuned for more information.

Lastly, I may be really getting ahead of myself but the HAA Dark Sky Star Party will be held on the weekend of September 19th through 21st. Just so you know, there will be a New moon on September 21st so if the weather cooperates the viewing (or imaging) should be excellent. More information will be coming out about this event in April.

For anyone looking for an outdoor winter activity this season, you might want to consider one of the Winterlit activities at the Mountsberg Conservation Area. For the first time, this year there are night astronomy hikes. These hikes run on Saturday evenings from February 1st to February 15th, and HAA's own Mario Carr is the guide for these hikes. For more information go to https://www.conservationhalton.ca/winterlit/.

I am afraid that I have to announce that due to lack of interest, the Astro 101 course will not be running this winter. Thank you to John Gauvreau for volunteering to run the course.

Now to our upcoming speakers, on Friday February 14th, Dr. Elizabeth Hays will be joining us via Zoom from the NASA Goddard Space Flight Center where she is the chief of the Astroparticle Physics Laboratory and the project scientist for the Fermi Gamma-ray Space Telescope. Dr. Hays will be talking about the still expected T Coronae Borealis nova; which has not yet, as of the deadline for the newsletter, exploded. In addition, Dr. Hays may also be sharing information about her own gamma ray research.

Looking ahead to Friday March 14th, Dr. Shohini Ghose will be joining us. Dr. Ghose from Sir Wilfred Laurier University is a Professor of Physics and Computer Science and NSERC Chair for Women in Science and Engineering. She will be joining us to talk about her book <u>Her Space, Her Time: How trailblazing women</u> scientists decoded the hidden universe.

As always, I look forward to seeing everyone on Friday February 14th at St. Matthew's-on-the-Plains Anglican Church at 126 Plains Road E. Burlington and on Zoom for those who cannot attend in-person.

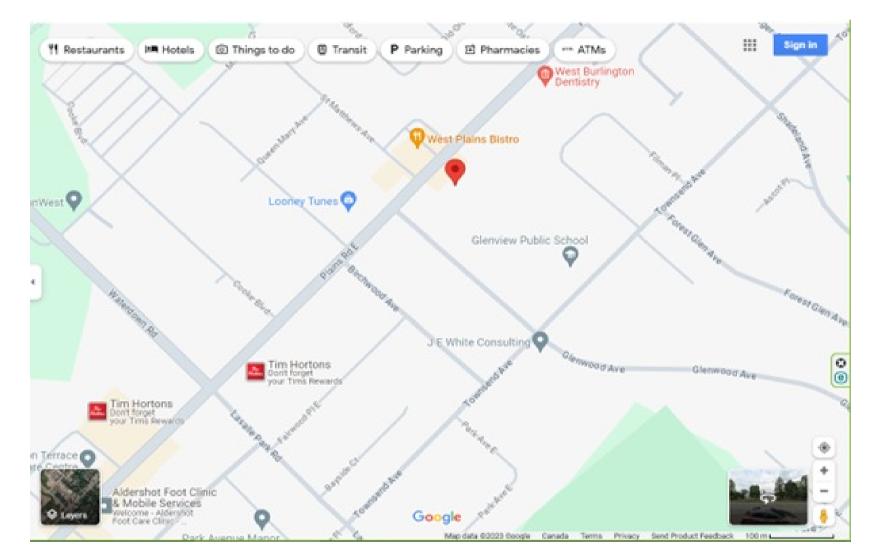
Clear skies,

Sue MacLachlan chair 'AT' amateurastronomy.org

Speaker Schedule for 2024-2025 Season				
Friday February 14	Dr. Elizabeth Hays - T. Coronae Borealis			
Friday March 14	Dr. Shohini Ghose - Important contributions by women astronomers			
Friday April 11	Dr Samantha Lawler, University of Regina: Satellites cluttering the night sky the impact of low orbit satellites on astronomy			
Friday May 9	Thomas Deere - Indigenous Astronomy			
Friday June 13	ТВА			

## **Meeting Location**

Our upcoming meeting is scheduled for *February 14th*, 2025, at St. Matthew's-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's-on-the-Plains Anglican Church (indicated with red locator) Image generated using Google Maps

## 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 BOOK LENDING LIBRARY POLICY

#### POLICY PURPOSE

To ensure that HAA Lending Library facilitates broad utilization of library collections and serves its members in a fair and consistent manner. The borrowing policy outlines:

- 1. The criteria for members to borrow books
- 2. Borrowing responsibilities of the member
- 3. Borrowing privileges and loan periods

#### 1. ELIGIBLE BORROWERS

- You must be a member in good standing (Paid up Membership) of the HAA to check out materials in this library.
- A valid HAA card is required to borrow materials.
- An HAA member <u>may not</u> check out books for non members.

#### 2. BORROWING RESPONSIBILITIES

Signing the library card implies the card holder's acceptance of and adherence to rules and regulations of the HAA Library. All card holders are responsible for:

- Materials checked out on their card
- Returning materials to the library by their due date
- Promptly reporting changes in registration information such as name, address or contact information to the HAA.

#### Notifications:

Members who provide an email address will receive notifications regarding their borrowing from the library. Members will be notified by email regarding items that are overdue.

#### 3. BORROWING PRIVILEGES POLICY

- Loan Period, Renewals
- Borrowing Limits for regular and best sellers (or special) items
- Suspension of Borrowing Privileges

#### 1. Loan Period

- a. Loan period for regular items is 1 (one) month.
- b. Renewal can be granted on regular items for 1 (one) month, up to 1 (one) time following initial checkout.
- c. Special Items are 1 (one) month with no renewal (but can be checked out again the following month).

#### 2. Borrowing Limits for Materials

- a. A maximum of 3 (three) regular items can be checked out at once, any time.
- b. A limit of 1 (one) best sellers (or special items) can be checked out at any time.

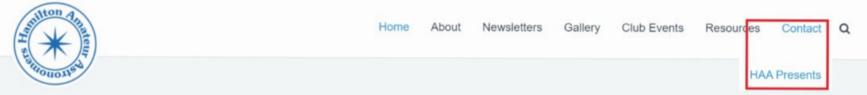
#### 3. Suspension of Borrowing Privileges

- a. Borrowing privileges can be suspended under certain circumstances, such as materials overdue for greater than 3 months or having more than 5 (five) materials overdue.
- b. Borrowing privileges can be suspended if the membership is not renewed.

## "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 <u>www.amateurastronomy.org</u> 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.

## 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.

# **HAA Helps Hamilton**



The H.A.A. is once again 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 <u>Hamilton Food Share</u>.

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



## The Sky This Month for February 2025 by Kevin Salwach

Hard to believe the first month of 2025 has already passed! It feels like our Christmas Social was just yesterday. The nights are slowly getting shorter as we start heading towards spring, but the February sky brings with it the best opportunity to view all your favorite winter objects and all of the most famous sights the cold weather months have to offer.

Starting off with your naked eye sky, lets take a look around at 9PM on our meeting night - February 14th - right in the middle of the month. Low in the west are the last glimpses of the constellations I wrote about last month - Cetus, Pisces, Eridanus, and the other fall constellations are finally setting, with Taurus slowly dragging behind them. Looking straight up to zenith, the winter constellations are again prominent on full display - *Gemini*, *Auriga* and the top of the Winter Hexagon are placed the best they get each year - high above the swampy horizon sky, with *Orion's* head and *Cancer* the crab up almost as high south and southwest of them. And looking towards the east, *Leo* is fully risen, with *Virgo* peaking up behind him, bringing with them a slew of spring targets and some of the best galaxies the night sky has to offer an amateur observer.

(Continued on <u>page 8</u>)

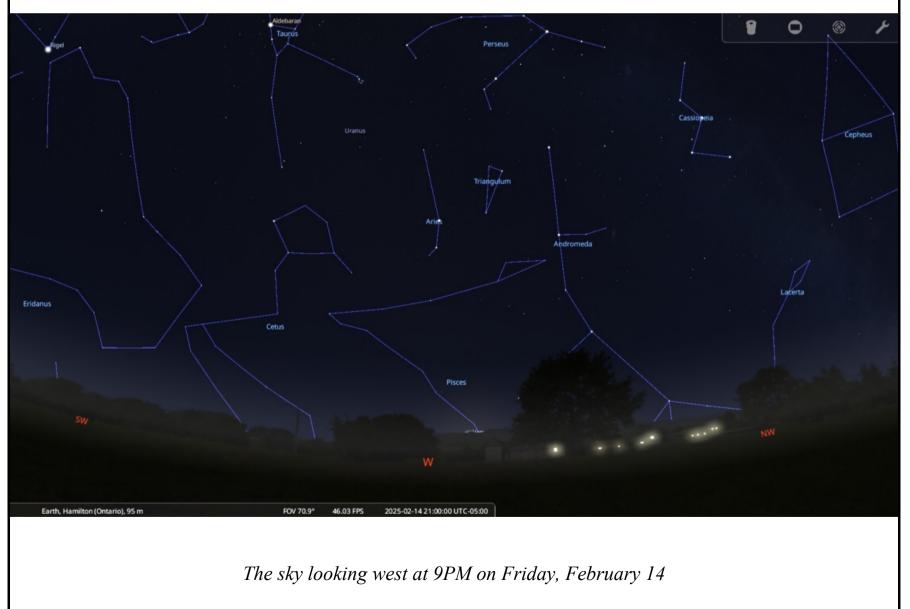
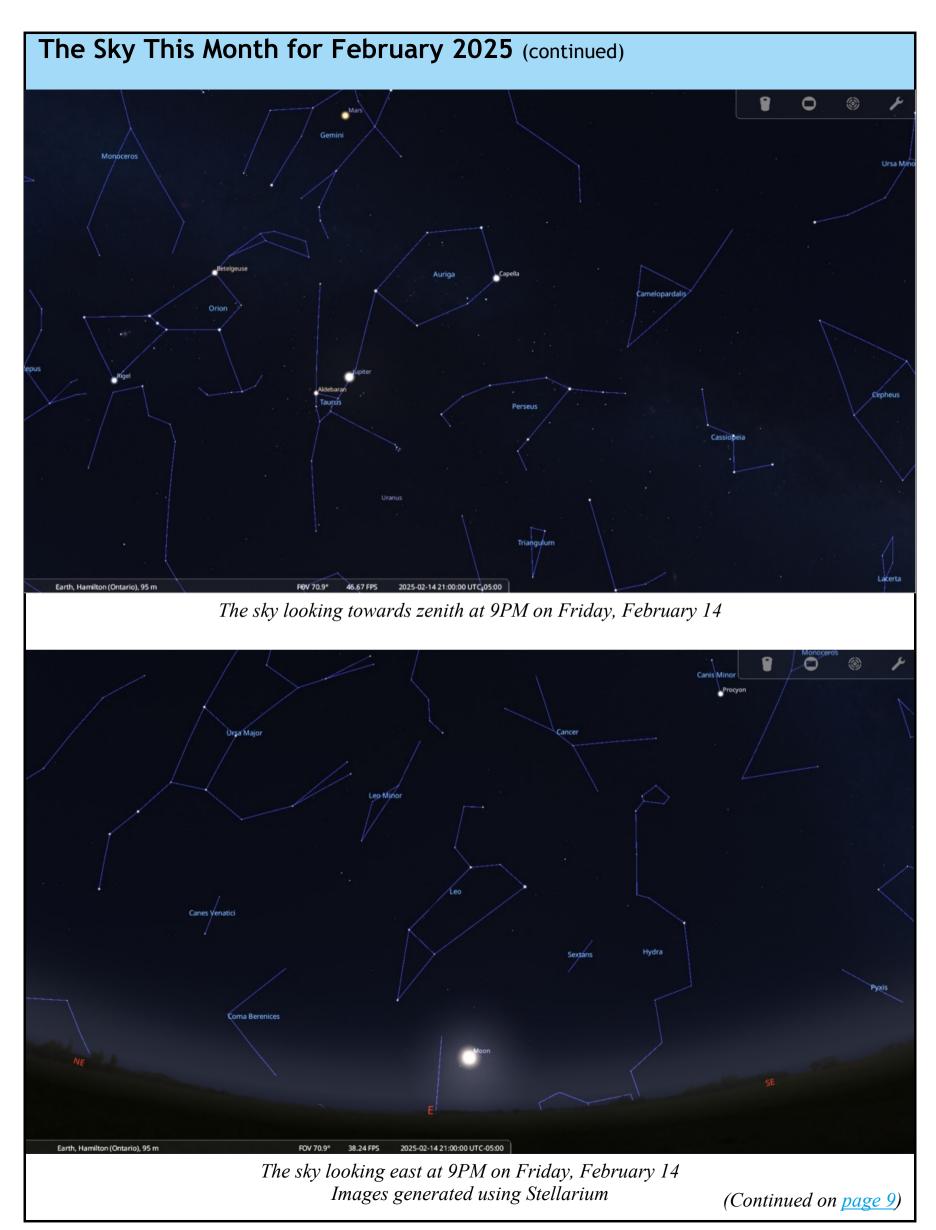


Image generated using Stellarium



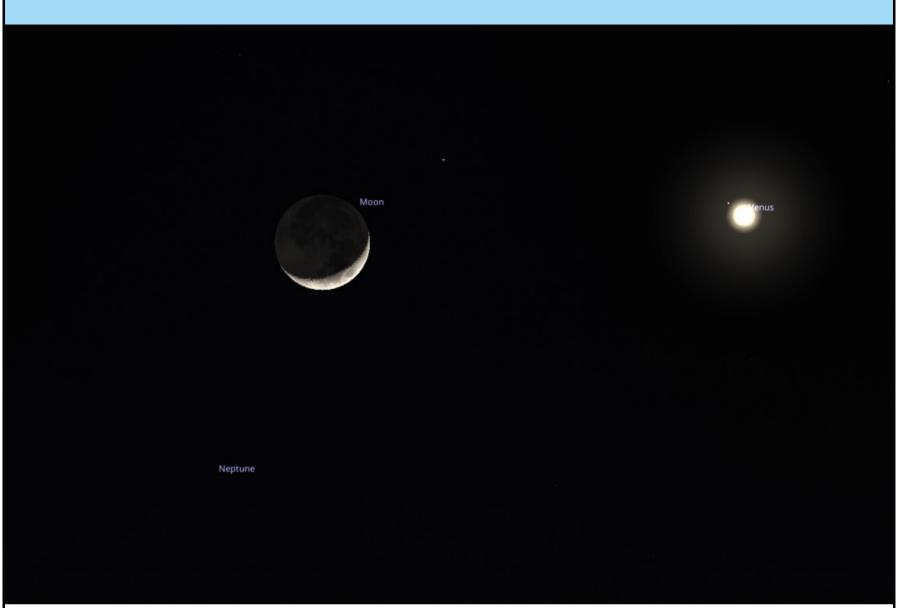
We begin February with a New Moon having just passed us on January 29th, with First Quarter on the 5th and Full Moon on Wednesday the 12th. Last Quarter is on the 20th, and New Moon comes around again on Friday the 28th at the very end of the month, meaning the first and especially the last week of February is when you should be marking down in your calendar if you want to get some viewing in under a moonless sky. The Moon this month puts on one heck of a show for us - so much so that instead of going planet by planet, I will give you a list of events to keep an eye out for right now:

- February 1st If you happen to be in Western Russia, you can observe the Moon occulting Saturn, otherwise, look towards the western sky just after sunset to see a picturesque conjunction with Venus just 2 degrees away, Saturn close by towards the horizon, and then take out your scope and look for Neptune only 1 degree to the southwest of the Moon at the same time
- **February 5th** The Moon passes within 4 degrees of Uranus try and spot the seventh planet in the same field of view as the Moon through a pair of binoculars in the hours after sunset and while you're out, follow the Moon as it moves towards the Pleiades, getting within a degree of the star cluster before both set just before 1AM
- February 6th the Moon passes within a few degrees of Jupiter high in the sky in Taurus
- *February 9th* The Moon passes within a couple degrees of Mars and Pollux in Gemini, making for a great binocular sight
- February 12th The full Moon rises after sunset within 2 degrees of Regulus in Leo
- February 17th just before sunrise, the Moon is just over a degree away from Spica in Virgo
- *February 21st* the Moon passes within 2 degrees of Antares in the early morning (and I mean 4AM early morning) sky



Not a bad month for our satellite!

(*Continued on page 10*)



The Moon, Venus and Neptune on Saturday, February 1 Image generated using Stellarium

Moving on to the planets now. *Mercury* is making its way just below the Sun from our perspective, and as such won't be visible all month long. It will reappear in the evening sky in the first week of March. *Venus* however continues to put on a show for us all month long - it reaches its greatest brightness on the 14th when it reaches a stunning magnitude -4.9. For the entire month it will be visible in the western sky for a couple hours after sunset. *Mars*, just coming off opposition in January, will be well placed all month long high up in Gemini - visible for most of the night all month from sunset to just before sunrise, there is plenty of opportunity to try and get a glimpse of the Red Planet in your scope. *Jupiter* is also still well placed for the month in Taurus, visible until around 2AM, though sinking lower and lower each day. Still tonnes of time for you to see those Galilean moons dance around the King of Planets. *Saturn* is still visible for a couple weeks in the hour or two after sunset very low in the western sky - however by the 22nd it drops below the horizon with the Sun - so the first couple weeks of the month are your last chances to see it until May! *Uranus* is visible in Aries until about midnight, while *Neptune* is still fleetingly visible in Pisces until the middle of the month just before sunset.

On to our deep sky objects: Last month I chose an area of the sky less known to the casual amateur astronomer with some challenging objects in it to pick out. This month, I will go to the classic, tried and true well-known area of the winter sky we all know and love - *The Winter Triangle*. I'll list off a few familiar objects for our raw beginners in the group, but even for experienced observers, the winter Messiers are still great targets for visual observing and for photography - they're famous and well known for a reason! The Winter Triangle is formed by *Sirius* in Canis Major, *Procyon* in Canis Minor, and

(Continued on <u>page 11</u>)

*Betelgeuse* in Orion. This area has some of the best and brightest deep sky objects the whole northern hemisphere sky has to offer.

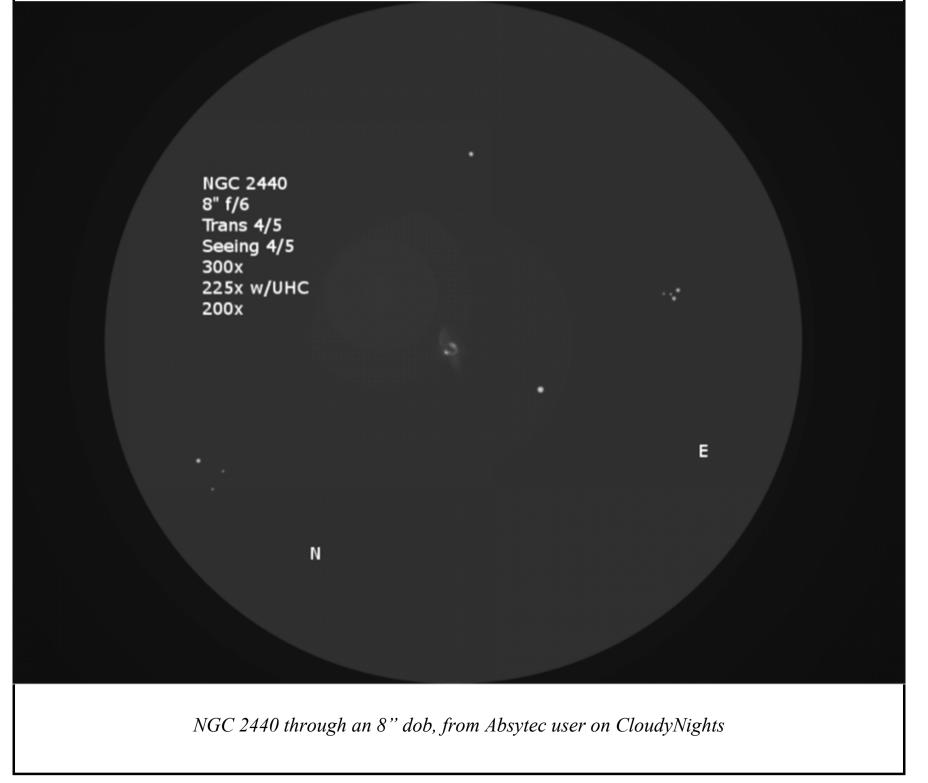
- *M42/43 The Orion Nebula* Mag 4 hanging down like a sword from Orion's belt, M42 is perhaps the most well-known deep sky object of all time bright enough to see with the naked eye, this emission nebula shows nicely in binoculars, and in any sized telescope you can pick out its dark dust blots and bright emission regions and the bigger aperture you go, the more detail you will be able to see. A "must observe" at the #1 spot of any new stargazer's list
- M41 The Little Beehive Mag 4.2 This bright, beautiful open cluster in the heart of Canis Major is another easy grab big, bright and colorful it's a perfect object for a beginner to see
- M47 Mag 4.4 Another bright, loose open cluster to the east of Canis Major in Puppis
- M35 The Shoe Buckle Cluster Mag 5.1 Although in Gemini, just above Orion, this winter staple is another great target for the beginner. I mentioned it previously in December, and its worth another look a bright, dense open cluster, and if you missed it in December, try some higher magnification and see if you can pick out its companion less than half a degree away, NGC 2158
- **M93 The Butterfly or Critter Cluster** Mag 6.2 Also in Puppis, this bright, colorful open cluster is known for its striking and unusual shape I've never seen it as a butterfly or a bug, but go and find it yourself and let me know what you think
- *M46* Mag 6.1 Another Messier in Puppis (for those of you who don't know, Puppis is the poop deck of the ship Argo a traditional constellation now occupied by Puppis, Vela and Carina). This is a bright, big and dense open cluster with a dozens of stars around the same brightness. At first glance you could possibly mistake it for a loose globular one star just off centre of the cluster may seem a little bit off in your scope. Crank up the magnification, and you'll notice that star is actually the small, compact planetary nebula *NGC 2438* at mag 10.2. Although they appear to be part of the same system, NGC 2438 is actually about 4 times closer to us than M46 is a purely coincidental but happy alignment
- M78 Mag 8.0 Orion's other prominent Messier object, this reflection nebula is located just above Orion's belt, and makes for a ghostly, diffuse sight in any sized telescope
- NGC 2244 The Harp Cluster Mag 4.8 this loose, bright open cluster is easy to find and see in any scope lying behind it however, is the large emission nebula known as the Rosette or NGC 2238 at magnitude 9 it may not seem that dim, but due to its low contrast and large size, you will need a larger scope of at the very least 6 inches and some very dark, clear skies to begin picking out bright and dark patches behind the cluster for astrophotographers, this one is a familiar favorite
- NGC 2170 The Angel Nebula Mag 9.5 for our astrophotographers, give this one a go. This reflection nebula is Monoceros is a mix of dark, sprawling dust lanes, bright, wispy reflection zones, and a smattering of prominent stars that give it an angelic appearance in photographs hence the name!
- NGC 2301 The Great Bird Cluster Mag 6.0 this big and bright open cluster is one of the best in the region for binoculars and a small telescope with a wide field. Its spread-out, distinctive shape gives it the appearance of a bird in flight
- NGC 2360 Caroline's Cluster Mag 7.2 named after its discoverer, Caroline Herschel, this cluster is bright, nicely shaped and large, and fills the field in a small scope
- *M50 The Heart-Shaped Cluster -* Mag 5.9 fittingly named for Valentine's Day, this bright, easy to find open cluster in Monoceros is so named because, well, in a small scope it has the shape of a heart! Find it about a quarter of the way between Theta Canis Majoris (the nose of the Great Dog) and Procyon, and while you're in the area, scan around and try and find some of the smaller, dimmer open clusters nearby like NGC 2343, NGC 2335, NGC 2396 and NGC 2345

(Continued on <u>page 12</u>)

#### Challenge Object: The Burning Ember Nebula (NGC 2440) - Mag 9.4

This tiny, fainter planetary nebula in Puppis off to the east of Canis Major is a good challenge for beginner and intermediate observers. You'll need at least a 6" scope, but preferably an 8" or bigger, some dark skies, some high magnification, and some excellent seeing. Once you navigate to the area, look for a compact, tiny, double lobed fuzzy object - in big observatory astrophotos you'll see its stunning, dramatic shape - but in your scope, you'll need to be patient, wait for steady seeing, and crank up the magnification to try and pull as much shape as you can out of it. Depending on the conditions and the size of your scope, you may even be able to see faint wisps streaking off from the main nucleus.

Good luck, clear skies and happy observing!



# NASA Night Sky Notes



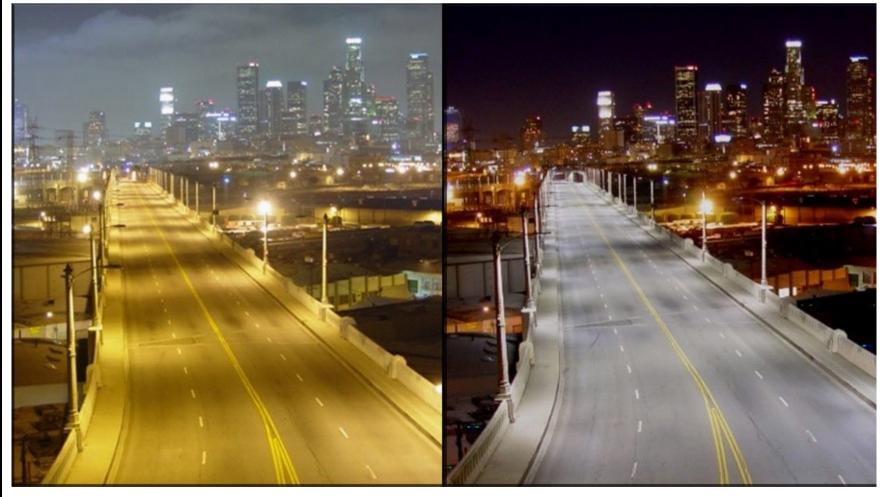
This article is distributed by NASA Night Sky Network (NSN).

Visit <u>nightsky.jpl.nasa.gov</u> to find local clubs, events, and more!

#### February Night Sky Notes: How Can You Help Curb Light Pollution?

By Dave Prosper Updated by Kat Troche

Light pollution has long troubled astronomers, who generally shy away from deep sky observing under full Moon skies. The natural light from a bright Moon floods the sky and hides views of the Milky Way, dim galaxies and nebula, and shooting stars. In recent years, human-made light pollution has dramatically surpassed the interference of even a bright full Moon, and its effects are now noticeable to a great many people outside of the astronomical community. Harsh, bright white LED streetlights, while often more efficient and long-lasting, often create unexpected problems for communities replacing their older streetlamps. Some notable concerns are increased glare and light trespass, less restful sleep, and disturbed *(Continued on page 14)* 



Before and after pictures of replacement lighting at the 6th Street Bridge over the Los Angeles River. The second picture shows improvements in some aspects of light pollution, as light is not directed to the sides and upwards from the upgraded fixtures, reducing skyglow. However, it also shows the use of brighter, whiter LEDs, which is not generally ideal, along with increased light bounce back from the road. Image Credit: <u>The City of Los Angeles</u>

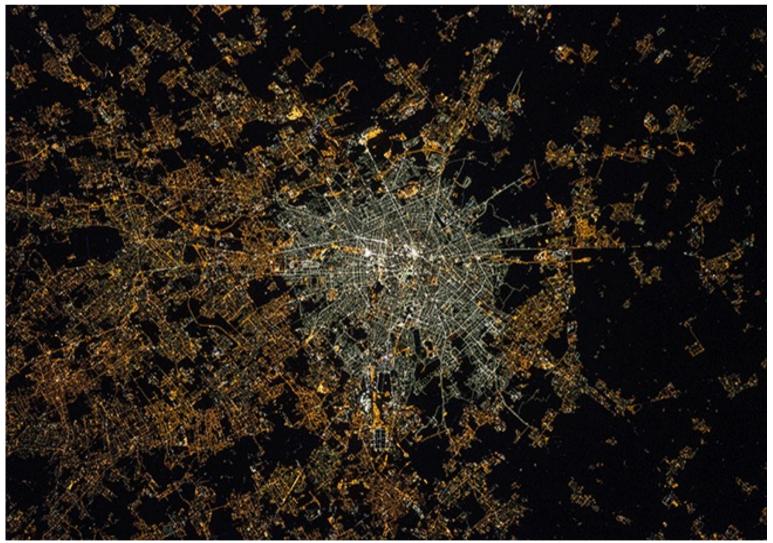
# NASA Night Sky Notes (continued)

nocturnal wildlife patterns. There is increasing awareness of just how much light is too much light at night. You don't need to give in to despair over encroaching light pollution; you can join efforts to measure it, educate others, and even help stop or reduce the effects of light pollution in your community.

Amateur astronomers and potential citizen scientists around the globe are invited to participate in the <u>Globe</u> <u>at Night (GaN)</u> program to measure light pollution. Measurements are taken by volunteers on a few scheduled days every month and submitted to their database to help create a comprehensive map of light pollution and its change over time. GaN volunteers can take and submit measurements using multiple methods ranging from low-tech naked-eye observations to high-tech sensors and smartphone apps.

Globe at Night citizen scientists can use the following methods to measure light pollution and submit their results:

- Their own smartphone camera and dedicated app
- Manually measure light pollution using their own eyes and detailed charts of the constellations
- A dedicated light pollution measurement device called a Sky Quality Meter (SQM).
- The free GaN <u>web app</u> from any internet-connected device (which can also be used to submit their measurements from an SQM or printed-out star charts) (Continued on <u>page 15</u>)



Light pollution has been visible from space for a long time, but new LED lights are bright enough that they stand out from older streetlights, even from orbit. Astronaut Samantha Cristoforetti took the above photo from the ISS cupola in 2015. The newly installed white LED lights in the center of the city of Milan are noticeably brighter than the lights in the surrounding neighborhoods. Image Credit: <u>NASA/ESA</u>

## NASA Night Sky Notes (continued)

Night Sky Network members joined a telecon with Connie Walker of Globe at Night in 2014 and had a lively discussion about the program's history and how they can participate. The audio of the telecon, transcript, and links to additional resources can be found on their <u>dedicated resource page</u>.

The International Dark-Sky Association (IDA) has long been a champion in the fight against light pollution and a proponent of smart lighting design and policy. Their website provides many resources for amateur astronomers and other like-minded people to help communities understand the negative impacts of light pollution and how smart lighting policies can not only help bring the stars back to their night skies but also make their streets safer by using smarter lighting with less glare. Communities and individuals find that their nighttime lighting choices can help save considerable sums of money when they decide to light their streets and homes "smarter, not brighter" with shielded, directional lighting, motion detectors, timers, and even choosing the proper "temperature" of new LED light replacements to avoid the harsh "pure white" glare that many new streetlamps possess. Their pages on <u>community advocacy</u> and on how to choose dark-sky-friendly lighting are extremely helpful and full of great information. There are even <u>local chapters of the IDA</u> in many communities made up of passionate advocates of dark skies.

The IDA has notably helped usher in "<u>Dark Sky Places</u>", areas around the world that are protected from light pollution. "<u>Dark Sky Parks</u>", in particular, provide visitors with incredible views of the Milky Way and are perfect places to spot the wonders of a meteor shower. These parks also perform a very important function, showing the public the wonders of a truly dark sky to many people who may have never before even seen a handful of stars in the sky, let alone the full glorious spread of the Milky Way.

More research into the negative effects of light pollution on the <u>health of humans</u> and the <u>environment</u> is being conducted than ever before. Watching the nighttime light slowly increase in your neighborhood, combined with reading so much bad news, can indeed be disheartening! However, as awareness of light pollution and its negative effects increases, more people are becoming aware of the problem and want to be part of the solution. There is even an episode of PBS Kid's <u>SciGirls</u> where the main characters help mitigate light pollution in their neighborhood!

Astronomy clubs are uniquely situated to help spread awareness of good lighting practices in their local communities to help mitigate light pollution. Take inspiration from <u>Tucson, Arizona</u>, and other dark sky-friendly communities that have adopted good lighting practices. Tucson even reduced its skyglow by 7% (as of 2018) after its own <u>citywide lighting conversion</u>, proof that communities can bring the stars back with smart lighting choices.

Originally posted by Dave Prosper: November 2018

Last Updated by Kat Troche: January 2025

# **Eye Candy** the Members' Image Gallery



**Venus and Saturn** on January 18, 2025, by **Bob Christmas** Single 5 second exposure with Canon 40D with 50mm lens, at f/4 and ISO 200.



The Open Cluster M50 in Monoceros, by Chris Szaban Imaged with a ZWO ASI294MC Pro camera through a Celestron NexStar 6SE scope; 39 minutes total integration time.

## **Eye Candy** the Members' Image Gallery



The Sunflower Galaxy M63 in Canes Venatici, by Alex Kepic Imaged with a ZWO ASI294MC Pro camera through a Celestron C8 scope; 3 hours 38 minutes total integration time.



The Pacman Nebula (NGC 281) in Cassiopeia, by Alex Kepic Imaged with a ZWO ASI294MC Pro camera through a Celestron C8 scope; 26 hours 8 minutes total integration time.

# 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:

– Feb 5:	Introductory	Astronomy f	for Kids —	Solar System
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- Feb 12: Written in the Stars: Love Stories in the Sky
- Feb 19: How do we know the Earth revolves around the Sun and other Solar System questions
- Feb 22: Introductory Astronomy for Kids Galaxies
- Feb 26: The Celestial Bear: The Six Nations' Night Sky
- For show times and further details, visit <u>www.physics.mcmaster.ca/planetarium</u>

# **UPCOMING EVENTS**

**February 14, 2025 - 7:30 pm** — H.A.A. Meeting at St. Matthew's Anglican Church, Burlington. Our guest speaker will be *Dr. Elizabeth Hays*, who will talk about the potential nova T Coronae Borealis. **There is the option of attending online via** <u>Zoom</u>. Past meetings can be viewed on our <u>YouTube</u> channel.

March 8, 2025 - 1 pm to 4 pm — H.A.A. Telescope Clinic at Valley Park Library, 970 Paramount Dr, Stoney Creek, ON L8J 1L8.

March 14, 2025 - 7:30 pm — H.A.A. Meeting at St. Matthew's Anglican Church. Our guest speaker will be *Dr. Shohini Ghose* of Sir Wilfred Laurier University.

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