



## RASC Windsor Centre's Monthly Newsletter ~ May, 2025

### A Personal Journey to being an RASC Volunteer and Observatory Director

*Brian Simpson, Director of Hallam Observatory.*

I write this in hope of recruiting more volunteers in this our 80th year of the Windsor Centre. It is only through volunteers that we've made it this far and enjoyable for all.

I thought I'd start out this article with a brief introduction to those who don't really know me.

I'm relatively new to Astronomy getting my first real telescope around 13 years ago. I'm also a rather strong introvert, preferring to do things on my own - whether learning how to set up a new telescope mount or the very technical skill of astrophotography. What I still struggle with is the constellations. I see the big dipper, but is it actually part of the great bear? I don't see a bear - I see a ladle with other stars around. I've discovered that our club has a wealth of knowledge and my path could have been much quicker had I asked.

What sparked my interest in astronomy was a family vacation in Hawaii where we toured Mauna Kea and got to see the great observatories at its peak. Since I was so new to astronomy, I thought it best to book the tour on a full-moon night. Live and Learn! After the daytime tour at the peak, we went down to around 9,000 ft to the visitors center where we had a Sky Tour with a very engaging guide. It was so cool looking through his scope at various stars and planets while learning about the night sky. I vividly recall him defocusing his scope to see a bright star near the horizon display it's true colours as it shimmered in the turbulence of our atmosphere. How could a star be that colourful?! How could a spot of light be so intriguing?! That simple act sparked something in me.

I seem to recall jumping head-first into volunteering my time with RASC Windsor, first joining council for a year not holding any positions, then becoming the Director of Hallam Observatory the following year.



Hallam Observatory - May 3, 2025

Photo by Sandy French

I joined the council because I simply felt I could maybe help-out in some small way, whether helping form a voting consensus or some odd jobs that needed to be done. My eyes were on the observatory ... eventually... though not quite so quickly.

Going back to my first paragraph, I never pictured myself giving a single sky tour at the RASC observatory. That's a massive deal for someone who's naturally quiet like me! Was I nervous before my first 'event'? Absolutely! One thing that I seem to recall though is it made me happy. I don't think there's been a night out that I didn't have a big smile on my face while giving someone else the opportunity to see something cool with their own eyes for the first time - young or old.

When asking for volunteers, we're not looking for someone who knows all the constellations and star positions in a fully clouded sky with a Super Moon blowing out any hopes of peeks at the stars. We're looking for someone who has a passion about our hobby - someone who can talk to others about Mars or Jupiter or the Moon and Sun. Someone who does know their open clusters from globulars is only a bonus! Can you share a smile during a person's first glimpse of Saturn's Rings through a telescope? Are you passionate about double-stars and can tell someone else why they are so interesting? If so - You're Hired!

Our council wants to make this year something special. We want to inspire youth and elderly alike. We need your help to do so! By the way, if you're good at building a deck, we're particularly interested this year. Reach out to anyone on council. I often

send out email and WhatsApp messages asking for volunteers at events. If you'd like to be included, just shoot me a line at [simpsonb@gmail.com](mailto:simpsonb@gmail.com).

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## Celestial Events ~ May-June, 2025

From [www.SeaSky.org](http://www.SeaSky.org)

**May 26 - New Moon.** The Moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 23:04 EDT. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.

**May 31 - Venus at Greatest Western Elongation.** The planet Venus reaches the greatest eastern elongation of  $45.9^\circ$  from the Sun. This is the best time to view Venus since it will be at its highest point above the horizon in the morning sky. Look for the bright planet in the eastern sky before sunrise.

**June 11 - Full Moon.** The Moon will be located on the opposite side of the Earth as the Sun and its face will be fully illuminated. This phase occurs at 03:45 EDT. This full moon was known by the Aboriginal peoples as the Strawberry Moon because it signaled the time of year to gather ripening fruit. It also coincides with the peak of the strawberry harvesting season. This moon has also been known as the Rose Moon and the Honey Moon.

**June 21 - June Solstice.** The June solstice occurs at 02:40 UTC. The North Pole of the earth will be fully tilted toward the Sun, which will have reached its northernmost position in the sky and will be directly over the Tropic of Cancer at  $23.44^\circ$  north latitude. This is the first day of summer (summer solstice) in the Northern Hemisphere and the first day of winter (winter solstice) in the Southern Hemisphere.

**July 4 - Mercury at Greatest Eastern Elongation.** The planet Mercury reaches greatest eastern elongation of 25.9 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the evening sky. Look for the planet low in the western sky just after sunset.

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*"We are going back to the Moon, and Canada is at the centre of this exciting journey."*

Canadian Astronaut Colonel Jeremy Hansen, Artemis II

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## SpaceX Satellite Trails: A Marvel and a Challenge for Astronomy

SpaceX has revolutionized space technology with its ambitious Starlink project, aiming to provide global broadband internet through a vast constellation of low-Earth orbit (LEO) satellites. While this initiative holds great promise for global connectivity, it has also sparked concerns within the astronomy community due to the visibility of satellite trails in the night sky.



SpaceX satellites, particularly Starlink satellites, are deployed in clusters and orbit at altitudes of 340km to 550 km. These satellites are often visible shortly

after launch when they travel in a train-like formation, creating bright trails that can be observed from Earth. This is particularly noticeable during dawn and dusk, as the satellites reflect sunlight while passing overhead.

The increasing number of Starlink satellites poses several challenges for astronomers and astrophotographers:

- **Interference in Astronomical Observations:** The bright trails can obscure observations from ground-based telescopes, making it difficult to capture clear images of deep-space objects.
- **Light Pollution:** The reflective surfaces of satellites add to sky brightness, affecting the quality of nighttime observations.
- **Radio Frequency Interference (RFI):** Starlink satellites operate in radio frequencies that may interfere with radio astronomy, limiting the ability of scientists to study celestial radio sources.

Acknowledging the concerns raised by the scientific community, SpaceX has taken several steps to reduce the impact of Starlink satellites on astronomy:

- **Darker Coatings:** Some satellites have been coated with non-reflective materials to reduce brightness.
- **Sunshades (VisorSat):** These shades help

limit sunlight reflection.

- **Orbital Adjustments:** Efforts to adjust satellite orbits to minimize disruption during astronomical observations.
- **Collaboration with Astronomers:** SpaceX is working with observatories and researchers to develop new technologies and strategies for minimizing interference.

Despite these mitigation efforts, concerns persist as SpaceX plans to launch over 40,000 Starlink satellites in the coming years, significantly increasing the number of objects in orbit. The challenge lies in balancing the benefits of global internet access with the preservation of a clear and accessible night sky for scientific discovery.

SpaceX's Starlink project is a groundbreaking advancement in satellite communication, but it also presents challenges for astronomy. While mitigation efforts are underway, continued dialogue between space technology developers and the scientific community will be crucial in finding sustainable solutions that allow both innovation and astronomical research to thrive.



Steve Pellarin, President & Grant Maguire, Treasurer, RASC Windsor Centre. Photo by Tom Sobocan

## In Next Month's AURORA:

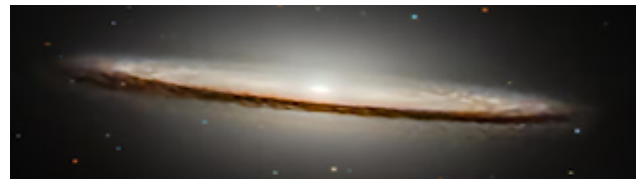
An official announcement of plans to celebrate RASC Windsor Centre's 80th Anniversary will appear in June's Aurora.

Also watch for a list of community events and volunteer opportunities for the Summer of 2025.

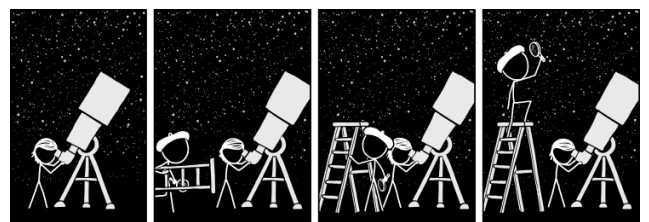
## 'The Sombrero Galaxy' Deep-Sky Highlight Object for May

*Steve Pellarin, RASC Windsor Centre President.*

Object: Messier 104 (NGC 4594)  
Visual Magnitude: 8.0  
RA / Dec: 12h41m19.5s / -11°45'52.7"  
Apparent Size: 9 x 4 arc minutes  
Distance: 31.1 Million Light-Years  
Type: Sa (Pec) spiral  
Constellation: Corvus



Called the 'Sombrero' due to its near edge-on appearance and resemblance to the broad brimmed Mexican hat, this galaxy will look like a small oval smudge of light in binoculars about 1/5 of the Moon's width (under dark skies). From its orientation, it looks somewhat like a spiral galaxy, however, it has an unusually large central bulge and a very prominent dust lane in the outer disk. In infrared light, the galaxy takes on more the shape of an elliptical galaxy. The galaxy also has been observed to have an unusually large number of globular clusters relative to other spiral galaxies (about 1,600). Spectroscopy data collected with the Hubble Space Telescope indicate that the core of this galaxy likely contains an enormous supermassive blackhole having a mass of close to 1 billion suns! This along with its strange appearance leads some scientists to believe that the sombrero may be the result of two galaxies merging at some point in the distant past. If you want to get the best view of its hat-like shape, you should use at least an 8- or 10-inch telescope. The Sombrero Galaxy is classified as a peculiar Sa spiral galaxy (with no bar inside), slightly bigger in actual size than the Milky Way (105,000 light-years wide).





## Windsor Centre

### Minutes of the General Meeting

Tuesday, April 15, 2025

Ojibway Nature Centre, Windsor Ontario

### General Meeting ~ Call to Order

This meeting was called to order by President Steven Pellarin at 19:30. The chair asked all attending to sign the registration book and noted that the 50/50 draw will take place after the break.

### Announcements, Attendance & Introduction of Guests

- Brian Coad identified himself as a member attending their first meeting.
- Green Laser Training will be available. Members were asked to indicate interest in the Sign-in book.
- Phyllis Bondy recently passed away at age 92. Phyllis was a past RASC member and councillor for over 25 years. Steve Pellarin will send a card of condolence from the Centre.
- April 26 - Point Pelee Dark Sky Night, including a presentation on Aboriginal Star Gazing.
- April 26 - Pelee Island Butterfly Sanctuary: Steve Pellarin will be doing an astronomy talk as a fundraiser for the sanctuary.
- April 26 - RASC National General Assembly: Online, register through [www.rasc.ca](http://www.rasc.ca)
- May 3 - International Astronomy Day. Live YouTube feed from RASC Centres across Canada.
- May 20 - Jenna Hinds, RASC Executive Director will be the guest speaker for May's general meeting.

### Minutes of the Previous Meeting

March 18, 2025. General Meeting Minutes were circulated by email, and printed in the Aurora. Susan Sawyer-Beaulieu requested a change to the description of her Milky-Way Galaxy image to include identifying a Stable Auroral Red (SAR) arc.

- **Motion to accept both Minutes as amended.**  
**Moved by Susan Sawyer-Beaulieu and seconded by Art Rae. Carried.**

### Presentation ~ The Artemis Program

Steve Pellarin continued his multimedia presentation of the Artemis missions, including a summary of the flight path of Artemis I and the projected path of Artemis II. This also included details on the SpaceX vehicles, lunar science objectives, and the Lunar landing mission of Artemis III.

### Break

The chair called a coffee break following the presentations at 20:45.

### Presentation ~ Director of Observing

Juliana Grigorescu and Susan Sawyer-Beaulieu outlined the viewing opportunities in the night sky from late April through early May. A selection of members' astrophotography was displayed and discussed, including:

- Mike Bugeja's daughter - Aurora from Red Rock, Ontario.
- Starr Livingston - M42 from Point Pelee.
- Steve Mastellotto - M51, M65, M66, M94, M101 & Sunspots (March 26 & April 8)
- Susan Sawyer-Beaulieu - Comet Tsuchinshan-ATLAS (October 16, 2024)

### Adjournment

A motion to adjourn the meeting was called at 21:43. Carried. *Clear Skies!*