ROYAL ASTRONOMICAL SOCIETY OF CANADA

Aurora

RASC Windsor Centre's Monthly Newsletter ~ June, 2025

Custom Telescopes for Students in Canada's North

Story & Photos by Leonardo Gonzalez-Chavez

Four custom telescopes are ready to bring new horizons to underserved schools in Canada, thanks to members of the Royal Astronomical Society of Canada's (RASC) Windsor Center and the Canadian Office of Astronomy Outreach for the International Astronomical Union (IAU).

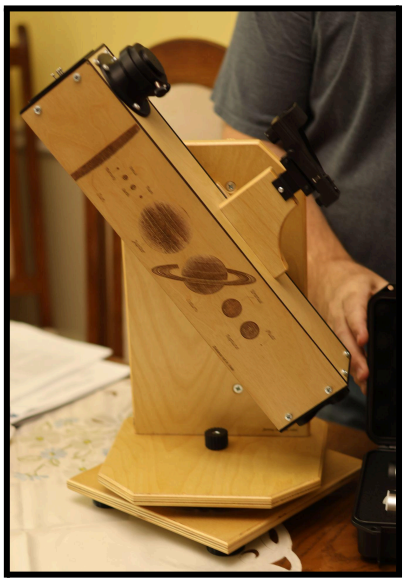
Steve Pellarin, president of the RASC Windsor Center (and past National Outreach Coordinator for the IAU), has been working with fellow astronomy club member Jeremy Hansen for over two years to create four small portable high-quality homemade telescopes. There are also plans to upload video tutorials to a special YouTube channel, so students can learn how to properly collimate their telescopes.

Steven Pellarin & Jeremy Hansen with the Telescopes

"I have the feeling people are going to be impressed," Pellarin says. "We've really put in the effort for this to mean something for the school kids and teachers who use the equipment." The telescopes will be distributed by the Canadian Astronomical Society (CASCA) through its Westar Program to underserved schools in communities within northern Canada.

The project was initiated by Pellarin through a grant from the Stars Shine for Everyone Project made available through a collaboration between the IAU Outreach Office and a European foundation working in concert with Bresser Optics out of Belgium.

Pellarin was able to acquire four sets of optics, a few accessories and CAD designs for a small portable telescope that could be constructed. Hansen volunteered to take on construction of the telescope at his own workshop and his family provided many of the materials for construction of the telescopes. The team worked together in modifying and improving the designs to match their own high-quality and durability standards.



Each of these telescopes is a 70mm tabletop Dobsonian reflector with an attached 1-power laser-dot finder-scope. They were built by Hansen using a combination of laser cut wooden panels and 3D printed plastic components. Laser engraved decals of the solar system and RASC emblems adorn each telescope's sides, along with Hansen's own personal signature. These telescopes can provide clear views of the moon, planets and star clusters.

The project was originally meant to conclude in 2023, the same year Pellarin had proposed the project to Hansen. However, issues with the optics required custom revisions to the telescope's design. These customizations came in many forms, including spring-loaded adjustable primary and secondary mirror cells in the telescope to allow students to easily collimate the telescope as needed and eliminate any image distortion.

Fortunately, Pellarin found an opportunity within their delays. To ensure students could get the most out of their telescopes, Pellarin organized a call-to-action within the RASC Windsor Center for donations in the spirit of their 80th anniversary.

As a way of honouring the 80th anniversary year of the Windsor Centre's establishment and its mission to support astronomy education, the club's council felt it appropriate to donate $200 to this worthy cause. This allowed Pellarin to purchase several eyepieces for use with the telescopes. Included in the sets is a unique "Cheshire" eyepiece, meant to allow for more precise collimation.

Pellarin is especially proud of the contributions made by Hansen and his family for the construction, saying they deserve praise for their large donations of materials and the quality of the final products.

All four telescopes and loaded accessory cases donated by Pellarin are now complete and ready for distribution. Pellarin hopes to have all of them delivered to classrooms by the beginning of the next school year in September.

Detroit Police Helicopter hit with Laser from Windsor

Story by Starr Livingstone & Sandy French

FIle Photo of a laser incident from June, 2020
Photo by Courtesy of CBP

As reported by the Windsor Star, a Detroit Police helicopter was hit by the beam of a laser pointer on June 4, 2025. The crew identified the source as being in a parking lot in Windsor and reported the incident to Canadian authorities. Windsor Police were dispatched to the location, but were unable to identify those responsible.

There were no injuries, but this incident highlights the dangers of laser pointing devices and why their use is regulated by law on both sides of the border. In Canada, The Department of Transport has authorized members of RASC to use Green Laser Pointers for educational purposes, as long as the user is a member with GLP Certification. This privilege should not be taken lightly as it can be revoked if dangerous incidents occur.

Condition 5 of the Department of Transport authorization states: *"A minimum of at least one trained and dedicated spotter must be used at each event where hand-held lasers will be used to watch for aircraft and warn the laser operators."* A copy of the DOT authorization is available on the RASC Windsor Centre website.

RASC Windsor has several certified members and certified instructors available to lead training sessions. Contact any member of the council for information. https://www.rasc.ca/laser-pointer-usage

RASC Executive Director visits the Windsor Centre

Story by Sandy French

The Windsor Centre is fortunate to be within a reasonable drive from the Toronto office of The Royal Astronomical Society of Canada. We hosted a visit from President Michael Watson last year and Executive Director Jenna Hinds joined us for the May 2025 meeting.

Juliana Grigoresco, Steven Pellarin, Jenna Hinds & Jeff Peacock
Photo by Tom Sobocan

Within the RASC organization, the Executive Director

is the senior management position, responsible for overall leadership and management. The executive director reports to the elected board of directors and oversees various departments, ensuring the organization's strategic vision aligns with its daily operations.

Hinds was introduced by Tom Sobocan before her presentation on the “Modern History of RASC”. Along with her personal background, Hinds detailed organizational changes that have occurred in the last few years, reflecting the changes detailed by Michael Watson last year.

The financial position of RASC has improved, and is on track to return to a balanced budget. As membership fees do not cover all the services provided, Hinds acknowledged that donations are very important to the organization. Ongoing challenges include sales of the US Observers Handbook and increased costs.

Several questions were addressed from the floor, including the possibility of moving the head office to save rental costs and how grants can negatively affect the operation of the Society. The visit concluded with a presentation from Jeff Peacock of his Aurora photography.

RASC National is available to support Centres across the country, and Hinds asked all members to use the website as a resource for information. www.rasc.ca

RASC Windsor’s 80th Anniversary

Story by Sandy French

1945 was a big year in Windsor’s history, as a group of interested amateur astronomers established the Windsor Centre of The Royal Astronomical Society of Canada.

Since then, dedicated volunteers have worked together to promote and educate the general public on all things related to the skies above.

To recognize 80 years of service, The Windsor Centre is organizing a celebration dinner on **Sunday, November 15** at The Fogolar. **Save The Date!**

Members of the council and other volunteers are working on the archive of historical material for display and presentation. If you have any photos, video or other media relating to the Centre, please contact Sandra van Gaalen. A guest speaker has been booked and further details will be released in September.

Meanwhile, shirts have been created to honour the anniversary and are available for purchase. Hats and patches are coming soon. Contact Grant Maguire for size and colour availability.

RASC National Update

Story by Tom Sobocan, National Council Rep

The most recent meeting was June 8, 2025. Here are some important items to note for the general membership.

- RASC General Assembly was May 3-4. There are recorded videos of the sessions to watch.
- RASC Annual Zoom Meeting, June 22, 1-4pm. It is free but members must sign up: https://secure.rasc.ca/events/am2025 Financial reports will be presented. Propositions for a new auditor will be presented.
- Board of Directors executive update (elections to be held on June 22): Michael Watson, President & Stuart Heggie, Treasurer will be stepping down from their elected positions for 2025–2026. Jenna Hinds will continue as Executive director.

- Stellarium Mobile: There will be six training sessions over the summer.

Please contact Tom Sobocan with any questions.

Celestial Events ~ June-September, 2025

From www.SeaSky.org

June 20 - June Solstice. The June solstice occurs at 22:42 EDT. 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° 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° 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.

July 10 - 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 16:38 EDT. This full moon was known by early First Nation people as the Buck Moon because the male buck deer would begin to grow their new antlers at this time of year. This moon has also been known as the Thunder Moon and the Hay Moon.

July 24 - 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 15:13 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.

July 28, 29 - Delta Aquarids Meteor Shower. The Delta Aquarids is an average shower that can produce up to 20 meteors per hour at its peak. It is produced by debris left behind by comets Marsden and Kracht. The shower runs annually from July 12 to August 23. It peaks this year on the night of July 28 and morning of July 29. The crescent moon will set early in the evening, leaving dark skies for what should be an excellent show. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Aquarius, but can appear anywhere in the sky.

August 9 - 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 03:56 EDT. This full moon was known by early First Nation people as the Sturgeon Moon because the large sturgeon fish of the Great Lakes and other major lakes were more easily caught at this time of year. This moon has also been known as the Green Corn Moon and the Grain Moon.

August 12, 13 - Perseids Meteor Shower. The Perseids is one of the best meteor showers to observe, producing up to 60 meteors per hour at its peak. It is produced by comet Swift-Tuttle, which was discovered in 1862. The Perseids are famous for producing a large number of bright meteors. The shower runs annually from July 17 to August 24. It peaks this year on the night of August 12 and the morning of August 13. The waning gibbous moon will block out all but the brightest meteors this year. But if you are patient, you may still be able to catch quite a few good ones. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Perseus, but can appear anywhere in the sky.

August 19 - Mercury at Greatest Western Elongation. The planet Mercury reaches greatest western elongation of 18.6° from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the morning sky. Look for the planet low in the eastern sky just before sunrise.

August 23 - 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 02:08 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.

September 7 - 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 14:10 EDT. This full moon was known by early First Nation people as the Corn Moon because the corn is harvested around this time of year. This moon is also known as the Harvest Moon. The Harvest Moon is the full moon that occurs closest to the September equinox each year.

September 7 - Total Lunar Eclipse. A total lunar eclipse occurs when the Moon passes completely through the Earth's dark shadow, or umbra. During this type of eclipse, the Moon will gradually get darker and then take on a rusty or blood red color. The eclipse will be visible throughout all of Asia and Australia and the central and eastern parts of Europe and Africa.

A Work in Progress

Photos by Grant Maguire and Mike Mastronardi

Work began this month to replace the observation deck at Hallam Observatory. The previous wood deck, installed in 2003, was showing signs of wear and needed some TLC. New foundation supports have been installed and a composite material will be used for the deck. The combination handrails and benches will be restored. The accessibility ramp will also be returned to service.

Events for Summer 2025

Point Pelee National Park ~ Dark Sky Nights
June 21, July 19, September 20.
Explore the park after dark and experience the dark skies of Point Pelee National Park. You will have the opportunity to stay late and experience the park at night. Visitors can pick up a seasonal star chart at the front gate upon arrival. The park is open until midnight, unless otherwise stated.
https://parks.canada.ca/pn-np/on/pelee

Point Pelee National Park ~ The Perseid Meteor Shower
August 12 & 13.
Dark Sky viewing of the Perseids. The park will stay open all night August 12 to August 13 (Open at 6 am August 12, close at 10 pm August 13)
https://parks.canada.ca/pn-np/on/pelee

Tecumseh Cornfest
August 22-24, McAuliffe Park.
Volunteers from the RASC Windsor Centre will be offering Sidewalk Astronomy and Solar Viewing sessions.
https://tecumsehcornfest.ca/

NASA's APOD celebrate 30 Years

https://apod.nasa.gov/apod/astropix.html

This pixelated image of "Starry Night" includes 1,836 APOD pictures published in a mosaic of 32,232 tiles.

Windsor Centre

Minutes of the General Meeting
Tuesday, May 20, 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

- Guest: Amanda Beatie identified themselves as a past member from 2018.
- Guest: Jenna Hinds, Executive Director of The Royal Astronomical Society of Canada.
- Green Laser Training is still available. Members are asked to indicate interest in the Sign-In book.
- Point Pelee Dark Sky Night - May 31st. Members are asked to volunteer to attend and lead viewing sessions with the public.
- May 3 - International Astronomy Day. RASC hosted a live YouTube feed from RASC Centres across Canada. Windsor Centre was live at around 10:30pm from Hallam Observatory, through the efforts of Rob & Jeremy Hansen. This was accomplished by using a video camera and wireless mics connected to a laptop and broadcasting via hotspot cell data. Around a dozen members were present to give Windsor a respectable showing.
- Colleen Melody has some of her paintings on display this evening and will be at “Art in the Park”, June 7-8.
- Leamington Art Gallery will be showing RASC member Astrophotography in October.

Minutes of the Previous Meeting

April 15, 2025. General Meeting Minutes were circulated by email, and printed in the Aurora. Mahayarrahh-Starr Livingstone requested his name be corrected for spelling.

- ***Motion to accept both Minutes as amended.***
  Moved by Grant Maguire and seconded by Michael Tiefenbach. **Carried.**

Presentation ~

Jenna Hinds, Executive Director of The Royal Astronomical Society of Canada.

Tom Sobocan, National Council Rep, introduced Jenna Hinds, and gave a brief presentation on her history with the organisation. Jenna presented “The Modern History of RASC” which included an update on changes in staffing at the national office, structural changes in the organization. Most importantly are plans moving forward to offer outreach to the Centres and support for the membership. Challenges in 2025 and beyond include increased costs and managing sales of the US Observers Handbook. However, the society is diversifying its revenue streams, having less reliance on grants.

Questions and discussion from the floor included reinstating programs, moving the office out of Toronto, future of the Canadian Amature Telescope Museum (housed at the national office) and membership participation in National level decisions. Key points for the Society going forward include maintaining appropriate oversight by the Board of Directors, and that membership dues do not cover the cost of services provided, so donations are extremely important.

Following the presentation, Juliana Grigorescu thanked Jenna for her visit and presented a gift of Jeff Peacock’s aurora photography (pictured in the Aurora, June 2025).

Break

The chair called a coffee break following the presentation at 20:38. The meeting resumed at 20:53.

Discussion ~ Observation Deck Replacement

Steve Pellarin opened a discussion on the proposed replacement of the Observation Deck at Hall Observatory. The current deck was built in 2003 and has served well. However, it is starting to show its age despite being sanded/stained repeatedly. The support posts are starting to rot and the section near the dome is sagging.

A material quote prepared by Brian Simpson (Hallam Observatory Director) places the cost of replacement near $10,000 if volunteers do the work. As this is a large portion of the funds the Centre has available, fundraising efforts are suggested (Bingos, Sponsorship) to rebuild this asset.

After a few questions, a show-of-hands indicated overwhelming support for completing the deck replacement immediately. Members of council accepted this as support to proceed, and will make the necessary arrangements.

Presentation ~ Director of Observing

Michael Dufour outlined the viewing opportunities in the night sky from late May through early June. This is a great time to see deep sky objects outside the plane of our galaxy such as M51 (Whirlpool Galaxy) and M80 (Cigar Galaxy). The Moon cycle was presented and a selection of members' astrophotography was displayed and discussed, including:

- Pete Barbaro - Sunspots (May 8 2025)
- Steve Mastellotto - Sunspots (various dates), NGC 4565 (Needle Galaxy), "Leo Triplet" (NGC 3628, M65, M66)
- Jeremy Hansen - Milky Way Galaxy with Hawaiian Volcano
- Jack Zhu - A mosaic of the Big Dipper with many Messier objects and galaxies.

Adjournment

A motion to adjourn the meeting was called at 21:35. Carried.

Clear Skies!

SWAP SHOP

Buy ~ Sell ~ Trade

For Sale ~ *Contact Susan Sawyer-Beaulieu*

- **80mm Bahtinov Focusing Mask;** 80mm Clear Aperture aluminum mask mounted in wood cell; Average Cell I.D. = 102mm (4.0in); Average Cell O.D. = 106mm (4.2in); Painted cell (1.0in wide) made of laminated birch wood veneer, making it tough but light; whole assembly weighs only 28 grams; $30.
- **174mm (6.8in) Bahtinov Focusing Mask**; 174mm Clear Aperture aluminum mask mounted in wood cell; Average Cell I.D. = 193mm (7.5in); Average Cell O.D. = 197mm (7.75in); Painted cell (1.5in wide) made of laminated birch wood veneer, making it tough but light; whole assembly weighs only 100 grams; $50.
- **Tripod Leveling Base with Offset Bubble Level**; Used, but good condition, fully functional; Base: 60mm diameter; Maximum load capacity: 22lb/10kg; Camera-Mount Thread Size: 1/4"-20 male threaded stud (top of base), Tripod-Mount Thread Size: 3/8"-16 female thread (bottom of base); Indexable tilt lock knob; Comes with wrench and 1/4" to 3/8" threaded adapter; $40.00 or best offer.
- **1kg (2.2lb) Counter Weight**; fits up to 14mm diameter counterweight shafts, e.g. fits counterweight shafts of Sky-Watcher trackers, Star Adventurer and Star Adventurer Mini; $10.

SWAP SHOP

Buy ~ Sell ~ Trade

For Sale ~ *Contact Randy Groundwater.*

Bresser Telescope, by Explore Scientific.
208mm (8") f/3.9 Newtonian / Vixen Great Polaris Mount

The 8” f/3.9 tube assembly is in beautiful condition and comes with caps and carrying case. Clean, bright optical coatings deliver impressive visual performance. The silky-smooth, robust 2” dual-speed focuser includes a 1 1/4” adapter and an extension tube accessory for eyepieces to reach focus.

The mount is an older, Vixen Great Polaris (GP) German equatorial with polar scope. Smooth and solid, this mount is a perfect match to hold the OTA and move it about with ease.

Included are two, premium 1 1/4” TeleVue eyepieces (20mm & 7mm) and a 2x TeleVue Barlow lens.

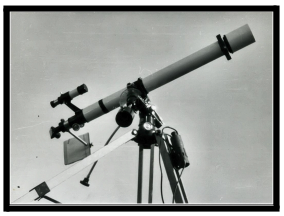
$900.00 for the complete setup.

For Sale ~ *Contact Art Rae.*

Baader Planetarium HYPERION 8-24mm Clickstop-Zoom eyepiece.
2” and also 1.25” adapter in leather pouch. $125.

For Sale ~ *Contact Art Rae.*

Short focus 5” and 3” achromat objective lenses.
Best offer.



Available ~ *Contact Art Rae.*

Original classic 60mm TASCO equatorial mount astro telescope.
Free to a good home.