Nova Notes

The Newsletter of the Halifax Centre of the Royal Astronomical Society of Canada

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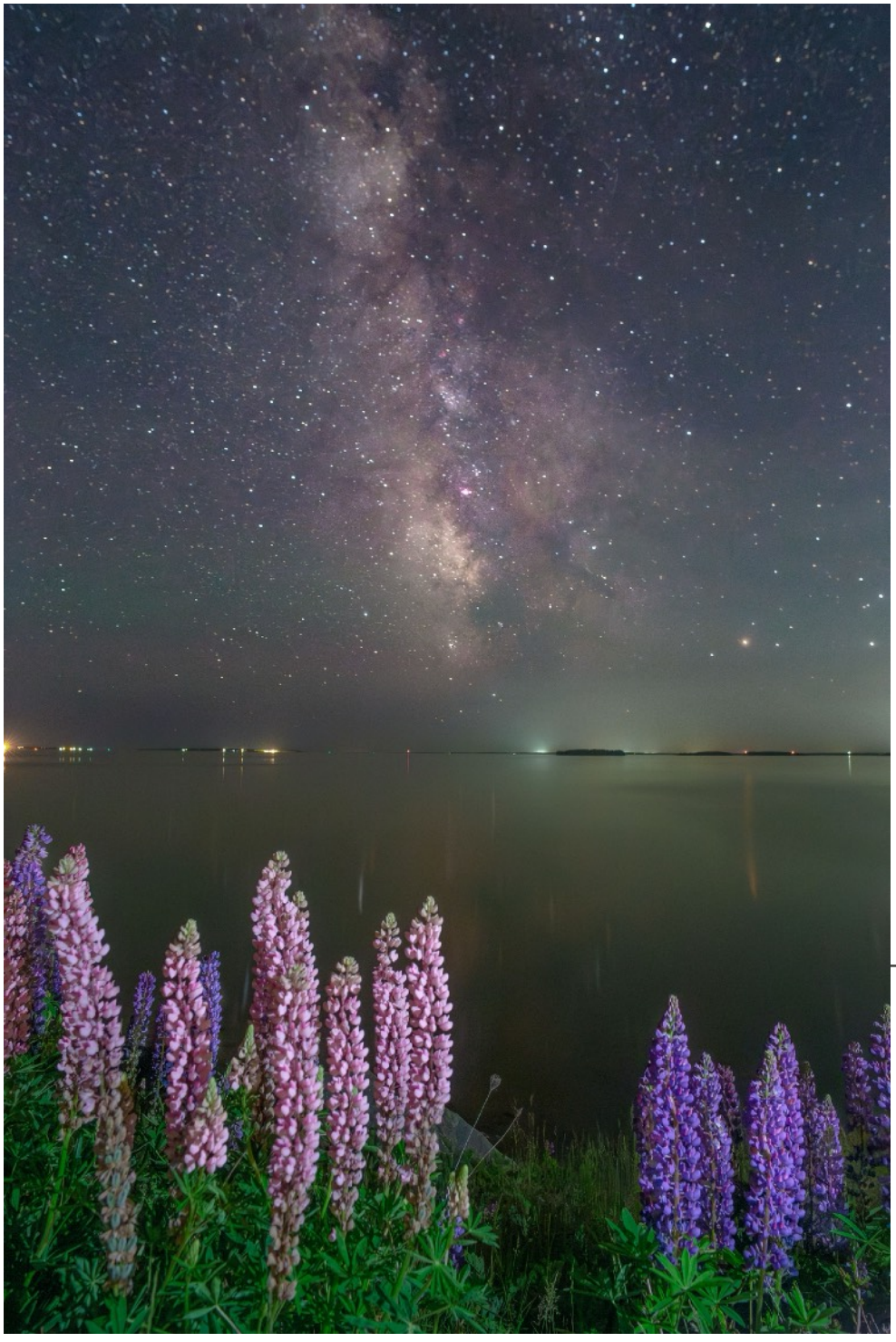

FEATURING:

PLUS ALL YOUR FAVOURITE REGULAR FEATURES!

SEPT / OCT 2025

VOL 56 NO 4

In this issue:

Cover Images:

Main Image:
Lupines and Milky Way
June 22, 2025 taken at East River, Nova Scotia. Canon 6D camera, Irix 21mm f1.4 lens set to f5.6. Exposure 30 seconds at ISO 6400.
by **Barry Burgess**

Thumbnail:
St. Croix Observatory drawing by **Mary Lou Whitehorne**

From the Editor

By John McPhee

Season of mists and mellow fruitfulness, wrote the English poet John Keats in describing the Hampshire countryside after a walk in September 1819.

Keats was only 23 when he wrote "To Autumn," one of his several odes that have stood the test of time as poetic masterpieces. Sadly that fall would prove to be the second-last of his short life; 17 months later, he died of tuberculosis. If his evocative ode is any indication, autumn was Keats' favourite season.

I'm more of a spring fanboy myself. For sure the fall colours are pretty and the crisp temperatures are refreshing. But a mild spring morning with a whack of warblers warbling away in the woods? That's my kind of day.

All the same, there's a lot to be said for autumnal stargazing. As Halifax RASC president Tony McGrath notes in his message on page 5, "somehow this time of year the sky seems clearer and more inviting."

Indeed. The sun sets more quickly so we get a long period of darkness, there are fewer pesky insects and if you're up late enough, you get to enjoy the bright winter constellations without freezing your tuchus off.

The bright constellation of Orion overpowers the light pollution of suburban Dartmouth after midnight on a recent October night. Photo by **John McPhee**

Continued on next page

If you've read my recent pieces, you'll know my health isn't super-duper so I do most of my stargazing from our suburban balcony. Luckily it looks directly southeast so after midnight on autumn nights Orion and Sirius dominate the skyline.

I've observed these amazing constellations for many (oh so many) autumns and winters but I still get a thrill when Orion clears the horizon.

Unlike many constellations (Taurus the… Bull?), the figure actually resembles its mythological namesake, the Hunter. You don't need an abundance of imagination to see a human-like figure stalking the night sky.

The three "belt" stars that appear to hold up the Hunter's pants particularly draw the eye. In fact, Alnitak, Alnilam and Mintaka are hundreds of light-years away from each other in space. It's one of those celestial optical illusions that create a convenient touchstone for modern stargazers.

In another bonus of autumn stargazing, particularly if you're not into post-midnight adventures, the summer constellations are still on display earlier in the evening.

In fact, the Summer Triangle of Vega, Deneb and Altair is directly overhead on September nights and has moved into the southwest by October.

It takes a nice open view to fully appreciate the autumnal night sky. One of my favourite such spots is our chapter's observatory in St. Croix, which sadly I haven't been able to enjoy much lately. All Halifax RASC members have access to this gem of an observing site. But it takes money to keep it going so if you haven't already, throw a few bucks into the Saint Croix Property Endowment fund, established in memory of our late friend and companion in the stars Dave Lane.

In the meantime, as "the red-breast whistles from a garden-croft and gathering swallows twitter in the skies," have a lovely autumn.

- John

Save the Dates!

Save the Dates: Observing at SCO

Members may be found observing at the St. Croix Observatory on almost every clear, dark night. Once a month, we encourage members and their guests to congregate at SCO, at which time new members are particularly welcome.

Members are advised to sign up to the email discussion list to keep up to date on gatherings of fellow observers.The proposed dates for SCO Observing nights 2025 are below.

Friday 21 Nov. Keptekewiku's (Rivers Starting to Freeze Moon)
Friday 19 Dec. Kesikewiku's or Kjiku's (Winter/Chief Moon)

* Check the email discussion list or our website (halifax.rasc.ca) for changes in schedule.

Upcoming Meeting Dates

(No meetings July / August but come see us at Dark-Sky Weekend and Nova East!)

Nov 1 - Pat Kelly - Telling time in Scotland: From Stones to Sundials
Dec 6 (+AGM) Paul Gray - STARMUS 2025

We are now hosting hybrid live/Zoom Members' Meetings. Halifax Centre meetings are usually held on the first Saturday of the month, except for July and August.

Come join us in-person in Room AT101 at Saint Mary's University or by pre-registering for the meeting on Zoom.

For information about the meeting and how to register for the Zoom session, please visit https://halifax.rasc.ca/index.php/activities/rasc-events

For past meeting replays, visit our YouTube Channel
https://www.youtube.com/c/raschalifax

YouTube

St. Croix Observatory

Part of your membership in the Halifax RASC includes access to our observatory, located in the community of St. Croix, NS. The site has expanded over the last few years and includes a roll-off roof observatory with electrical outlets, a warm-room, and toilet facilities. We welcome you to bring your own equipment or to use the Centre's 400-mm Dobsonian telescope,100-mm binoculars, and the recently acquired SCT and gear for astro-imaging.

Enjoy dark pristine skies far away from city lights and the company of like-minded observers searching out those faint "fuzzies" in the night. Most clear Moon-free nights, you will find our keen observers out there! Announcements of members visiting SCO are made on the Centre's Discussion List. If you are not a key holder and would like to become one or need more information, please contact the SCO Manager, Tony McGrath, at scomanager@halifax.rasc.ca.

SCO is Open!

Go to our website (https://halifax.rasc.ca) for the latest SCO usage guidelines and conditions.

St. Croix Observatory
drawing by Mary Lou Whitehorne

NOTE: As of Fall 2023, the building has lights again! (Thanks to Tony McGrath and Peter Hurley, the lights have been connected to 110v AC power.)

Halifax RASC Board of Directors, 2025

Elected	
President	Tony McGrath
Vice-President	Peter Hurley
Secretary	Judy Black
Treasurer	Gregg Dill
Director	Jeff Donaldson
Director	Matthew Dyer
Director	David Hoskin
Director	Vincent Vallée
Director	David McMullin
Appointed	
Honorary President	Patrick Kelly
Auditor	David Chapman
Communications Committee, Chair	TBD
Dark-Sky Preserve Committee, Co-Chair	Peter Hurley
Dark-Sky Preserve Committee, Co-Chair	Tony Schellinck
Education & Public Outreach (EPO) Chair	David Hoskin
Governance Committee, Chair	Judy Black
National Council Representative	Judy Black
Nominating Committee, Chair	Peter Hurley
Nova Notes, Editor	Lisa Ann Fanning
Nova Notes, Copy Editor	John McPhee
Observing / EPO Chair	David Hoskin
St. Croix Observatory, Manager	Tony McGrath
Webmaster	Jerry Black

SAVE THE DATES FOR 2026!

Dark-Sky Weekend
COMING SOON!

New Moon August 13, 2026

Nova East Star Party
COMING SOON!

A Message from the President

Hello fellow RASCals

Welcome to fall and the lifting of the woods ban. SCO is back in business!

October always feels like a fresh start in our observing year with the autumn constellations taking their place overhead. The hours of darkness arrive earlier and the evenings tend to be cool and crisp. Somehow this time of year the sky seems clearer and more inviting. What a great time to start a new observing project, perhaps even the pursuit of a RASC certificate program.

Nova East was a great success this year, and a big thank you to all those who worked hard to make it so successful. In particular I would like to thank Allen Sutherland and Atlantic Photo Supply for the generous donation of a 150mm Dobsonian Telescope as the door prize. Not only was this a wonderful and much appreciated gift, but it also created one of the most memorable moments of the weekend. When the winning number was drawn, it belonged to John Read, our keynote speaker. Instead of keeping the prize, John asked if there was anyone new to astronomy in the audience. A young girl about 12 years old who was attending with her grandfather raised her hand. John immediately and very graciously offered her the telescope. It was a wonderful moment and turned what could have been a simple draw for the door prize into a heartwarming moment.

Our annual SCO BBQ was held on Friday 26 September. While the early evening was mostly cloudy, true to the forecast the skies cleared towards sunset, the wind dropped and we were treated to a beautiful sunset with the lovely fall colours reflected in the glassy smooth surface of the pond south of the observatory.

I would also like to acknowledge and extend a sincere thank you to all those who participated in the Urban Star Party held 27 September at Harry DeWolf Park in Bedford. The event was organized by David Hoskin Chair of our Education & Public Outreach efforts and he was assisted by several members of the Centre who gave of their time and talent to host the event. David reports that it was a great success with 40 - 50 passersby entertained with eyepiece and tablet views of the setting Moon, Saturn, the Eagle Nebula and the Andromeda Galaxy. On behalf of all the members of RASC Halifax Centre I want all who participated to know how grateful we are for your efforts.

Finally I would like to encourage all members to consider donating to the Saint Croix Property Endowment fund (SCOPE). We are in the final 3 months of the campaign where all donations are matched dollar for dollar through the generosity of Michelle Lane & Tony Schellinck. Donations can be made through an e-transfer to our treasurer - treasurer@halifax.rasc.ca. In the comment field please indicate that your donation is for the Dave Lane Memorial SCOPE Fund. Full details are available on the home page of our website.

All the best
Tony McGrath
President RASC Halifax Centre

Email the Centre Executive:
president@halifax.rasc.ca

***Nova Notes*: The Newsletter of the RASC Halifax Centre of the RASC**
PO Box 31011, Halifax, Nova Scotia B3K 5T9
Nova Notes is published five times a year, in February, April, June/July, September/October and December.
The opinions expressed herein are not necessarily those of the RASC Halifax Centre.
Articles on any aspect of astronomy and related activities will be considered for publication.

2025 Summary: Nova East Star Party

https://novaeast.rasc.ca
By Chris Young

LOOK UP! - The Stars Belong to Everyone!

was the theme for our star party held at Smileys Provincial Park during the weekend of August 22 to 24, 2025. This was the 37th Nova East Star Party (NE). The Theme *Look Up!* was chosen to capture the intent of our weekend to promote visual, binocular and telescope viewing.

Many thanks to Lisa Ann Fanning for the 2025 logo design for printing on the Nova East t-shirt, and to Gregg Dill for setting up the printing of the t-shirts at Pro Design Cresting Ltd. in Truro.

2025 NE Planning Team (NEPT):
Members included Team Co-Leads Judy Black, Gary Weber, & Chris Young, Tony McGrath (Registrar), Gregg Dill (Treasurer), Lisa Ann Fanning (logo designer), David Chapman, Patrick Kelly, Vincent Vallee with valuable support from Jerry Black (website) and Paul Gray. Meetings were on Zoom over several planning meetings held in the spring and early summer. A wrap-up meeting will be held in October. The success of Nova East 2025 was because of the dedication, imagination and work done by each of the members during the planning and implementation phases of this event. Like the 2024 NE, the Team planned this event as an observing weekend and a social event. All activities and decisions considered for previous NE's were reviewed and updated.

SMILEYS PROVINCIAL PARK
Smileys was more than welcoming and permitted our use of the shelter even though it was an operating shop and storage area for the Park since the flood. They were very trusting giving us full access of the building and they parked their equipment outside for the duration of our stay. Many thanks to Mark Moore of Nova Scotia Parks and his staff who made us welcome and arranged access to the building. The building was well used each day for Registration, the Astronomers' Breakfast, presentations, the flea market and the "Red Light District" (aka astronomer lounge with red lights suspended to retain members' night vision).

Task Chart:
The NE Task Charts of earlier years acted as a detailed guide for the Nova East Planning Team and provided the timeline and checklist for planning the event. This document was used throughout the planning process and revised as required. Many thanks to Judy Black for making our planning easy with her schedules, minutes and task lists from NE gone by! Much of the preparation for Nova East 2026 is already drafted.

The Team was able to carry on using their earlier work for Blomidon by rebranding it to Smileys, with many thanks to Jerry Black and Dave Chapman for their work on this. Insurance from the national RASC was in effect for the event.

Weather:
The Friday was wonderfully clear and Saturday night started fair, got murky and then cleared after midnight. The *Look Up!* observing events occurred both nights although the southern sky was a challenge Saturday night until after midnight. Sunday night weather predicted cloudy skies and most members packed up Sunday with a few optimistic souls staying through to Monday. Overall the weather and seeing was considered good – especially if you stayed up late Saturday night!

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Nova East Star Party

Speakers and Events:

The weekend events all proceeded as planned indoors and outdoors:

Friday evening – *Beginner Mini-Talks: Telescopes and Observing* - David Hoskin described the various types of telescopes commonly available and their mountings. Gerry Brosky described how the eye works in astronomical observing. Dave Chapman explained exit pupil and how it pertains to the observer's eye and eyepiece selection infield.

Friday Night - *Public Observing* **-** Using the Centre's *Nova East 2025 Observing and Imaging List,* a coordinated series of presentations was given:
- Presenters Gary Weber & Chris Young provided a tour of the constellations and stories associated with them. Individual stars and stellar objects were pointed out.
- This was followed by the Binocular Event where Tony Schellinck and Judy Black showed how to find the same targets in greater detail through binoculars.
- The Telescope Event (5 telescopes) showed those select items, seen previously at low power but now visible under high magnification. Telescope operators included Dave Chapman, Jerry Black, Kathy Walker, Karen Hamblin and Paul Gray.

Dark Sky Observing / Imaging in the Field took advantage of the excellent seeing conditions.

Saturday Morning Family Activity: *Walk the Solar System:* Presenter David Hoskin was prepared to provide a tour through a Solar System model to scale in the observing field; this was unfortunately cancelled.

Saturday Morning Workshop: *Laser Pointer Training* was provided by trainer Peter Hurley. This training included the regulations and procedures on the safe legal use of laser pointers as an instruction tool by RASC presenters during outreach events. Participants received a Certificate of Laser Pointer Use that meets the Authorization that RASC has received from Transport Canada. Certificate holders are certified to use a laser pointer and to spot for another user.

Saturday Noon – Michelle Lane hosted *Lane's Book Mart: Books for sale from Dave Lane,* and at the same time the members had a *Nova East Swap: Equipment and Books* took place.

Saturday afternoon Workshop: *Make your Own Sundial* **-** Dave Chapman gave an explanation of how a sundial works and led a workshop where participants assembled their own sundial by cutting and folding a printed card.

Saturday Night - RASC Observing Certificates & Awards & Door Prizes**:** Judy Black announced this year's RASC Certificate and Award Winners. The draw for Door Prizes followed. Dave Chapman and Chris Young, supported by the Centre and other donors, had collected Door Prizes. Twenty-four prizes were given away plus a grand prize - a SkyWatcher Heritage 150P collapsible tabletop Dobsonian Telescope donated by Allen Sutherland at Atlantic Photo Supply (APS). John Read won the telescope and without hesitating gave his prize to a new observer – a 12 year old from New Glasgow who was at NE with her grandfather from the RASC Ottawa Centre. John capped this off by donating his book *110 Things to see with a Telescope* to get the new observer well started.

Saturday Night Public Talk: Keynote speaker John Read presented ***Stories in Space.*** These were stories behind the astounding fleet of telescopes current and planned that deliver the amazing science we come to expect from the frontier of astronomy. John gave us a very engaging presentation punctuated with chocolate bars delivered overhead to the audience for correct answers to his questions.

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Nova East Star Party

Saturday Night - Public Observing – was a repeat of the well-received Friday night guided observing using naked eye, binoculars and telescopes based on following the Centre's *Nova East 2025 Observing and Imaging List*.

Dark Sky Observing / Imaging in the Field took advantage of the available seeing conditions which became excellent after midnight.

Sunday Morning - **Sherman Williams Memorial Walk** – Pat Kelly led the walk sharing birding and natural plant lore with us as we walked along the wooded roads serving campsites as the Park trails were off limits due to the fire ban. The poison ivy patch was very notable.

Sunday afternoon – Most of the members packed up and headed home as the forecast was not promising for observing.

Sunday night: A small group of RASC members stayed the extra night, hoping to get a few more images, a few more views of the night sky. Smoke from the fires affected the early evening and then partial cloud made for interesting observing through sucker holes. This cool evening shut down just before midnight when cloud cover completely removed all hope of observing.

Other Highlights:
An ***Astro Breakfast,*** always popular, was provided Saturday and Sunday mornings with coffee, tea, juice, muffins, donuts and fresh whole fruit.

The ***Astronomer's Lounge*** was back, with tea, coffee and hot chocolate, fruit and cookies always available in the shelter into the early morning hours.

Chris Young
Co-Lead, 2025 Nova East Planning Team
RASC Halifax Centre

2025 Nova East Group Photo by Gary Weber

Photo Album: 2025 Nova East Star Party

David Chapman sent in this iPhone photo from Nova East.

The Telescope Field - A portion of the telescopes on the field. Photo by **Jerry Black**

Waiting for Dark: Telescopes setup waiting for Astronomical Twilight.Photo by **Jerry Black**

Pine Tree at the entrance: Note the split and opening through the trunk. Photo by **Judy Black**

The Teapot - The Milky Way over Nova East
Photo by **Jerry Black**

Photo Album: 2025 Nova East Star Party

The Davids join ranks - David Chapman, David XXXIX Anderson (RASC Ottawa Centre) and David Hoskin. Photo by **Judy Black**

On Tour - Bird Watching Tour
Photo by **Judy Black**

Inspecting the Solar Scope - Trying to put the scope back together. Photo by **Judy Black**

Gerry Brosky - Explaining how the eye receives light. Photo by **Jerry Black**

Peter Hurley Teaching Laser Pointer Regulations.
Photo by **Jerry Black**

Dave Chapman Teaching how to create a sundial.
Photo by **Jerry Black**

2025 Annual BBQ at SCO

Photos and text by Judy Black (unless otherwise indicated)

It was a small but mighty crew of 17 last evening at the St. Croix Observatory. We arrived in mostly cloudy skies, but by the time it came around to stars coming out, we had gloriously clear blue soon to be dark skies. Windy at first, but the wind died down; the pond on the south face of the observatory was smooth like glass. Fall colours were evidenced in the trees surrounding the property.

Chris Young and Peter Hurley were the BBQ Chefs. Thank you, gentlemen. You did a great job!

Once all the good food was consumed, telescopes were set up by David Hoskin, Peter Hurley, Judy Black (with assistance from Mark Kaye) and Frank Logan. We even had a sneak peek at the moon between clouds before it set.

Chris Young set up the Thurlow binoculars and we had great views of M11, the Pleiades, and attempted to find M33 (Triangulum Galaxy) with them but discovered the very faint galaxy was more easily found with binoculars than in the Thurlows. Chris and I had great fun showing these sky gems to a relative newbie to astronomy. Also found with regular binoculars were the Coathanger, M22 even though the Teapot lid star (Kaus Borealis) had just dipped into the trees, Melotte 20, and Saturn which showed its side-on view between the tall trees in the SE.

It was an early night despite the great conditions. At 10:30pm ADT, SQM = 21.18 and the temperature was 13°C. However, the dew was very evident at that hour. By 11:30pm, everyone had packed up and was heading home.

Thanks to everyone who came, contributed, and did all the warm and jolly hosting duties!

Wish more members could've come out to join us on what was an amazing night under the stars. Consider coming next year!

Chef Chris (we forgot to bring the chef's apron). Couldn't find the BBQ tools so we improvised (thanks to Paul Gray who suggested using the cedar shims we found in the store room). Chris commented the Centre had "gone green."

David Hoskin and John Read deep in an astronomy discussion

More of the attendees enjoying dinner.

(Right) Clouds moving out at sunset (Photo by Mary Lou Whitehorne)

Asteroids with a Nova Scotia Connection

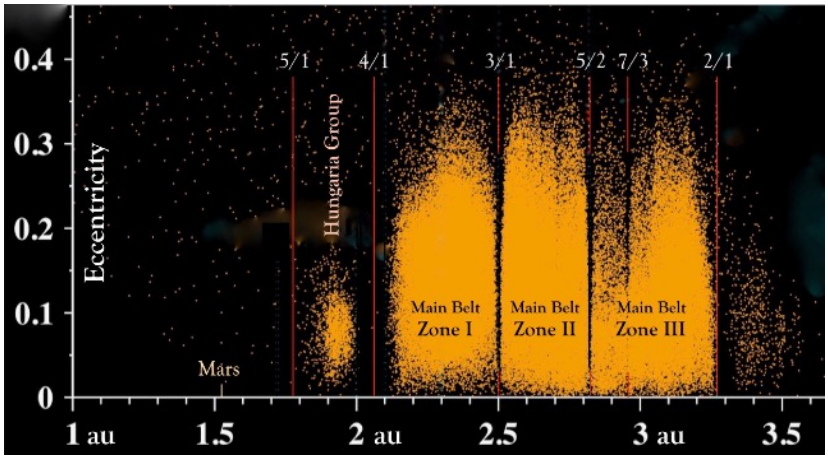
By Dr. Roy Bishop & Judy Black

Introduction

Judy Black approached Dr. Roy Bishop to suggest co-authorship of a *Nova Notes* series about asteroids with a Nova Scotia connection, to which he agreed. Roy is the lead author with Judy providing the non-science information. Also want to extend our gratitude to Peter Jedicke (London Centre) who was of great assistance in locating the citations (even during a London Knights hockey game – thanks, Peter!).

This is the last in the series of 6 articles published in the RASC Halifax Centre newsletter. To find this and previous instalments, go to the Halifax Centre website (http://halifax.rasc.ca/index.php/publications/17-nova-notes-newsletter). Hope you enjoy and learn from the series.

Instalment 6 of 6 — The Main Belt, Zone III



The last three of the fifteen Nova Scotia Asteroids (NSAs) are in the outer-most Zone III of the Main Belt, bounded by the Kirkwood gaps at the 5/2 (2.82 au) and 2/1 (3.28 au) resonances with Jupiter:

	a	e	i	T	diameter
(304233) Majaess	2.864 au	0.0703	12.63°	4.85 y	~ 2 km
(497593) Kejimkujik	2.868 au	0.0310	4.93°	4.86 y	~ 2 km
(144907) Whitehorne	2.963 au	0.1105	0.50°	5.10 y	3 km

"a" is the size of the semi-major axis. "e" is eccentricity (how much the ellipse deviates from a circle). "i" is the inclination of the orbit. "T" is orbital period.

In terms of both eccentricity and inclination, **(304233) Majaess** is unremarkable, falling within a standard deviation of the eccentricity and inclination averages of the fifteen NSAs.

With e = 0.0310 **(497593) Kejimkujik** has the smallest eccentricity of all fifteen NSAs. In other words, the spacing of the foci of its orbit (2ae) is barely 3% of the major axis (2a). Its orbit is almost indistinguishable from a circle. Copernicus, who used circles to model the orbits of the planets, would have liked Kejimkujik!

With an orbital period of more than 5 years, **(144907) Whitehorne** is the furthest of the NSAs from the Sun. Furthermore, she has the smallest inclination, merely half a degree, staying closer to Earth's orbital plane, the ecliptic, than any other NSA. Another remarkable feature of Whitehorne is her semi-major axis (2.963 au), almost at the position of the 7/3 orbital resonance with Jupiter (2.957 au), a resonance that almost splits Zone III of the Main Belt in two.

Continued on next page

Asteroids

In the order of increasing semi-major axes, here are the original citations that accompanied the naming of:

(304233) Majaess (discovered 2006, named 2012)
Daniel Majaess (b. 1984) is a young Canadian observational astronomer who researches the Cepheid distance scale, variable stars, and the Milky Way's spiral structure and its many star clusters. He frequently makes innovative use of photometric surveys and data from small telescopes.
[*Minor Planet Circ.* 79108]

(497593) Kejimkujik (discovered 2006, named 2022)
Kejimkujik National Park and National Historic Site is an area of natural beauty and historical significance in Nova Scotia, Canada. The indigenous Mi'kmaq people consider Kejimkujik to be a sacred ancestral place. The Royal Astronomical Society of Canada declared Kejimkujik to be a Dark Sky Preserve in 2010.
[*WGSBN Bull. 2*, #8, 11]

(144907) Whitehorne (discovered 2004, named 2007)
Mary Lou Whitehorne, currently second vice-president of the Royal Astronomical Society of Canada, has devoted much of her life to educating young people in the basics of astronomy. Her original and interesting approach has led to a surge of interest in astronomy among young people throughout Canada.
[*Minor Planet Circ.* 59925]

Addendum
Eight of the fifteen NSAs are named for individuals who have made major contributions to the national RASC. In the list that follows, there is some duplication with the original asteroid citations, but a few major contributions to the national Society either were not mentioned in the original citations, or occurred after the citation was published. Contributions to our Centre were also not included. In the order of their asteroids outward from the Sun:

David Turner — RASC (Editor of the *RASC Journal*); Halifax Centre Councillor/Director

Roy Bishop — RASC (President, 1st Vice-President, 2nd Vice-President, Editor of the *RASC Observer's Handbook)*; Halifax Centre (President, Honorary President, Secretary, National Council Representative, Nova East Coordinator)

Carlyle Beals — RASC (President, 1st Vice-President, 2nd Vice-President, Honorary President)

Paul Gray — RASC (Editor of the *RASC Observer's Calendar*); Halifax Centre (President, 1st Vice-President, Observing Chair, Councillor, Nova East Coordinator)

David Chapman — RASC (Editorial Board, *Explore the Universe* Consultant, Editor of the *Observer's Handbook);* Halifax Centre (1st Vice-President, Dark-Sky Preserve (DSP) Committee Co-Chair, Observing Chair)

James Edgar — RASC (President, Secretary, Recorder, Editor of the *Observer's Handbook*, Production Manager of the *Journal,* Information Technology Committee, RASC web content editor); Halifax Centre Associate Member

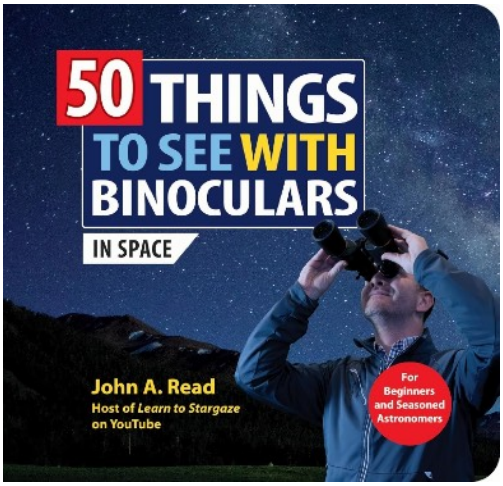
David Lane — RASC (President, 1st Vice-President, 2nd Vice-President, Editor of the *RASC Observer's Calendar*, Information Technology Committee, RASC Server Administrator*),* RASC Halifax Centre (President, Treasurer, Secretary, Observing Chair, *Nova Notes* Editor, National Council Representative, Auditor, Nova East Coordinator)

Mary Lou Whitehorne — RASC (President, 1st Vice-President, 2nd Vice-President), Author of *Skyways*, *Astronomy Handbook for Teachers,* Halifax Centre (President, Secretary, Honorary President, Councillor, Observing Chair, National Council Representative, Nova East Coordinator)

Happy asteroid hunting!

Book Review: *50 Things to See with Binoculars (In Space)* by John A. Read

Review by David Hoskin



Novice stargazers are often advised to learn their way around the night sky with a good pair of 7x50 or 10x50 binoculars before purchasing a telescope. Binoculars, which are affordable, easy to use, portable, and have a wide field of view, offer a simple and rewarding way to enjoy the night sky and explore the cosmos in a way that is not possible with the unaided eye. Indeed, even seasoned amateur astronomers enjoy using binoculars to sweep the Milky Way and view large open star clusters like the Pleiades. Although there are several informative and well written books that aim to guide binocular users in their exploration of the night sky, *50 Things to See with Binoculars (In Space)*, written by YouTuber and Royal Astronomical Society of Canada (RASC) member John A. Read, nicely succeeds in raising the bar when it comes to the available books on binocular astronomy.

This sturdy, large-format, spiral-bound book consisting of about 128 pages is designed to accompany binocular users on many outings under the night sky. The cover should stand up well to dew while the interior pages are of high-quality glossy paper. The format makes it easy to lay the book flat outdoors while starhopping to your next target. Although the book's tone is beginner-friendly, seasoned astronomers will also find it useful as a field guide. The writing and various personal anecdotes clearly convey the author's enthusiasm for stargazing. *50 Things to See with Binoculars (In Space)* begins with a succinct introduction to binocular astronomy, describing different types of binoculars and how to use them, optional accessories for stargazing, and how to best prepare for an enjoyable and successful observing session. As the title indicates, the book focuses on 50 different celestial targets, groups of targets or types of targets that can be viewed with binoculars.

These include stars and asterisms, double stars, open and globular star clusters, nebulae, galaxies, and solar system objects. The book is organized into sections, beginning with circumpolar binocular targets, followed by summer, autumn, winter, and spring targets for binocular users.

Each section has a star map showing notable stars, asterisms, constellations, and deep-sky objects, as well as some descriptive text and information on the target of interest. Solar system objects, including the Moon, planets, and comets, and events such as eclipses and meteor showers round out the book's content.

"Binocular-view" images of every celestial target, which were captured by the author using a small telescope (Askar FMA 180 or Sharpstar 61) and camera (ZWO ASI2600MC or ASI294MC) paired to provide a field of view that is comparable to 7X50 binoculars, show the binocular user exactly what to expect when exploring the night sky. Each page also contains an observing log and sketching circles to record observations, which when completed will meet most, if not all, of the requirements for the RASC's Explore the Universe Program.

(Continued on next page)

The Appendix contains the Application Form for obtaining an Explore the Universe Certificate, as well as instructions for adding comets to Stellarium, a planetarium for computer or smartphone. The book also contains a brief but helpful glossary of astronomical terms.

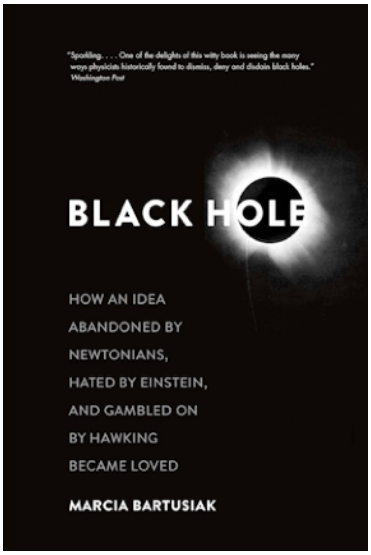
If you are in the market for a field guide to use for your next session under the night sky with binoculars, *50 Things to See with Binoculars (In Space)* is a highly recommended purchase for both casual and seasoned stargazers. It will make exploring the night sky both easy and rewarding.

Book Review: Black Hole

How an Idea Abandoned by Newtonians, Hated by Einstein, and Gambled On by Hawking Became Loved

by Marcia Bartusiak Yale University Press 2015

Review by Tony McGrath



Marcia Bartusiak's ***Black Hole*** is not a technical discussion of relativistic physics or the mathematics of singularities—instead, it's an engaging chronicle of how the black hole evolved from a quirky mathematical artifact to one of the most central and accepted objects in modern astrophysics.

I found this an enjoyable read because it offered something different: in addition to an explanation of how the physics of black holes came to be understood, it adds the human dimension to the story of the black hole—how the idea survived over 50 years of skepticism, rebranding, and eventually achieved vindication.

Bartusiak focuses on the intellectual journey - the stumbles, breakthroughs, and resistance that shaped the history of black hole science. It tells a fascinating story, including just how reluctant Einstein was to accept the implications of his own equations and shows how long it took the astronomical community to take black holes seriously.

The book speaks to the sociology of science and the way ideas must not only be mathematically correct but culturally accepted within the scientific community in order to survive. For example Chandrasekhar's 1930s groundbreaking work on the fate of massive stars was ridiculed by Eddington, at the time the world's expert on the structure and luminosity of stars, which had the effect of delaying acceptance of stellar collapse for years.

Bartusiak writes with a journalist's clarity and a historian's depth. She avoids equations but doesn't oversimplify. This book is less about teaching you what a black hole *is* and more about showing you how scientists came to *believe* in them—and what that process tells us about the nature of science itself, and how the human ego can insert itself into the scientific process.

Black Hole is a reminder that science doesn't progress in a straight line. The concept that now anchors so many of our astrophysical models was once considered laughable. Bartusiak shows us the winding path from skepticism to consensus, and in doing so, deepens our appreciation for both the universe and the people who work to understand it. Highly recommended!

Members' Universe
Food for the Soul: The Poetry of Paul Heath

ALIEN?

By Paul Heath

From the depths of the Maelstrom
IT CAME.
Like a discus, it slices the plane of our Life's path.
Too rapid to stay, faster still It will depart.

We had set the warning grid,
It could not slip by unseen.

Back searches, from Beyond did confirm
Yet before Its track was marked,
Alien, through the halls, an echo called.
Clearer minds, larger Eyes did swing outward.

From Beyond it came,
Its breath, our lives cannot sustain,
ALIEN! Louder now, the Echo's refrain.
Yet our living Orb, no time has had to hold.
Perhaps, as Its distant, country, cousins wear
Departing, It will be similarly attired.

Outflung the maelstrom from,
Eons to the Void belonged,
How many Orbs have caught and flung it on?
How many Echoed calls has It inspired?

At closest touch, unseen will be, as
Its reddish hue's Match, it slides quickly past,
Then on, from our largest Sphere, a last push to collect.
Yet there, there, Our last chance we'll have,
The TRUTH of the Echoes call to view.

Time is the Bandit now, we cannot wait.
Let us stand beside the track.
To view up close, an Ancient travelers
Fleeting rush, back, Back
To the vastness of the Void.

BREATH

By Paul Heath

We scan the vastness, seek
The grey mist upon the grey expanse.
A silhouette
That hides a twinkles brief flicker.

We sweep the vastness, seek
The faintest Breath on distant skies.
Thin lines
The hidden shape of the warmth behind.

Wide eyes
Into the void we've tossed,
Seeking shadows, aligned.
And prismed eyes
To mark faint lines, of
Hidden Breath, on distant skies.

And soon, to block
Lights potential life-giving glare,
A hand will stretch upon the void,
To mark faint lines,
From glimmerings, misaligned.

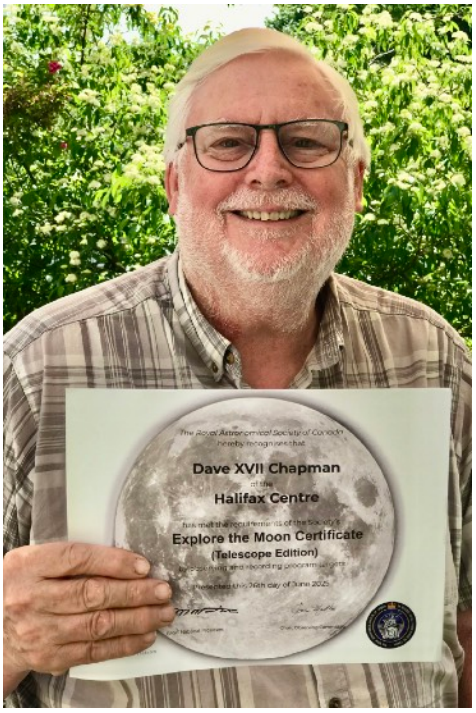
We seek,
Within the vast sea of stars.
That faintest traces of lifted Breath,
The Breath of Life,
On far, far distant shores.`

Members' Universe:
Congratulations Observer, David Chapman!

David Chapman shares a great moment with us: "My old astro buddy Gordon Hawkins* dropped by for a lightening visit. He's a pro photographer so I got him to snap some photos of me with my recently arrived RASC Explore the Moon observing certificate and pin.

This certificate means a lot to me, because I (with Patrice Scattolin and Ted Dunphy) developed the concept for EtM and rolled it out as a beginner's RASC observing program in 2016. As an experienced lunar observer already, it did not occur to me to actually complete the beginner's program. I later changed my mind. Using a variety of small telescopes, I completed the program in 9 observing sessions over several years.

**Gordon was a youth member and Observing Chair of RASC Halifax in the 1980s, forty-odd years ago. He and I collaborated to create a Messier object observing program for the Centre. He moved to Toronto and has had a successful career in photography and video, including shoots with the Tragically Hip.* https://gordonhawkins.com



Members' Universe: Jason Dain's Comet Images

Jason Dain took this image (left) of Comet C/2025 A6 (Lemmon) from Glasgow Head, Guysborough County NS - October 14, 2025

He shares "with clear skies in the forecast, I packed up all my gear and headed for Canso to shoot Comet C/2025 A6 (Lemmon). My previous attempt had been foiled due to some clouds so I wanted to take another shot. The weather forecast for the next week or so didn't look too great so I figured what the heck!

I had two mounts and scopes working on other targets while I waited for the comet to rise. Once it hit about 2 a.m., I started shooting with a tracker and DSLR and then a short while later I turned my scopes to the comet.

This is a wide field shot using a Nikon D850 and Samyang 135mm f/2 lens on an iOptron Skyguider Pro. The comet shots are tracked 20x30s, f/2.2, ISO 3200, and the foreground is shot from the same location at the same settings with the tracker turned off.

I stacked the comet in Pixinsight and used both Pixinsight and Photoshop for the comet image. I combined the foreground and sky and finished processing the image in Photoshop."

Jason Dain's image of Comet C/2025 A6 (Lemmon) taken October 14, 2025. (right)

"This is 20 mins of 30s exposures taken from a long capture of over an hour using a Celestron RASA 8" scope, ZWO ASI294MC camera, Skywatcher EQ6R Pro mount controlled by an ASIAIR guided on the stars. The images were captured under very dark skies in Canso, Nova Scotia.

To make this image, I stacked the selected images in Pixinsight. After that, I removed the stars from the images using RC Astro StarXterminator. Once I had the starless images, I used CometAlignment in Pixinsight to register on the comet and then stacked the output of those images. I processed the comet only shot as normal and then used the stars from the normal integration to make the final image."

Members' Universe: A Tour By Jerry Black

M16 Eagle Nebula by **Jerry Black**
Total time 40 minutes
St. Croix Observatory, Nova Scotia.
September 21, 2025

Exposure - 4 x 10 min Gain 100, Camera - ToupTek ATR2600C [6224 x 4168], Optics -120mm Skywatcher Esprit on a Proxisky UMi20S Strain Wave mount, Guiding - ToupTek GPM462M using Phd2 with a 400mm guide scope. Average 20 min sub GuideRMS ranged from 0.4 to 0.6 using 0.5 sec exposures, Controller - Kstars on MeLe Quieter 4C, Filter - Triad Quad Ultra

Processed in PixInsight. WeightedBatchPreprocessing Script, BlurXTerminator, GraXpert, Spectrophotometric Colour Calibration, NoiseXTerminator, StarXTerminator, Generalized Hyperbolic Stretch on both the stars and starless images, HDRMultiScaleTransform on Starless PixelMath to recombine the images

NGC 6523 Lagoon Nebula by **Jerry Black**
Total time 80 minutes.
St. Croix Observatory, Nova Scotia.
September 21, 2025

Exposure - 8 x 10 min. Gain 100, Camera - ToupTek ATR2600C [6224 x 4168], Optics -120mm Skywatcher Esprit on a Proxisky UMi20S Strain Wave mount, Guiding - ToupTek GPM462M using Phd2 with a 400mm guide scope. Average 20 min sub GuideRMS ranged from 0.4 to 0.6 using 0.5 sec exposures, Controller - Kstars on MeLe Quieter 4C, Filter - Triad Quad Ultra

Processed in PixInsight, WeightedBatchPreprocessing Script, BlurXTerminator, GraXpert, SpectrophotometricColour Calibration, NoiseXTerminator, StarXTerminator, Generalized Hyperbolic Stretch on both the stars and starless images, HDRMultiScaleTransform on Starless, PixelMath to recombine the images

Members' Universe: A Tour By Jerry Black

M20 Trifid Nebula by **Jerry Black**
Total time 70 minutes
St. Croix Observatory, Nova Scotia.
September 24, 2025

Exposure - 7 x 10 min., Gain -100, Camera - ToupTek ATR2600C [6224 x 4168], Optics - 120mm Skywatcher Esprit on a Proxisky UMi20S Strain Wave mount, Guiding - ToupTek GPM462M using Phd2 with a 400mm guide scope. Average 20 min sub GuideRMS ranged from 0.9 to 1.1 using 0.5 sec exposures, Controller - Kstars on MeLe Quieter 4C, Filter - Triad Quad Ultra

Processed in PixInsight,WeightedBatchPreprocessing Script, BlurXTerminator, GraXpert, NoiseXTerminator, StarXTerminator, Generalized Hyperbolic Stretch on both the stars and starless images, HDRMultiScaleTransform on Starless, PixelMath to recombine the images

NGC7380 The Wizard Nebula with the ATR2600C by **Jerry Black**
Total time 120 minutes
Lower Sackville, Nova Scotia
September 30, 2025

Exposure - 8 x 15 min.
Gain 100
Camera - ToupTek ATR2600C [6224 x 4168]
Optics - 120mm Skywatcher Esprit on a Proxisky UMi20S Strain Wave mount
Guiding - ToupTek GPM462M using Phd2 with a 400mm guide scope. Average 20 min sub GuideRMS ranged from 0.4 to 1 using 0.5 sec exposures.
Controller - Kstars on MeLe Quieter 4C
Filter - Triad Quad Ultra

Processed in PixInsight, WeightedBatchPreprocessing Script, BlurXTerminator, GraXpert, NoiseXTerminator, StarXTerminator, Generalized Hyperbolic Stretch on both the stars and starless images, HDRMultiScaleTransform on Starless, PixelMath to recombine the images

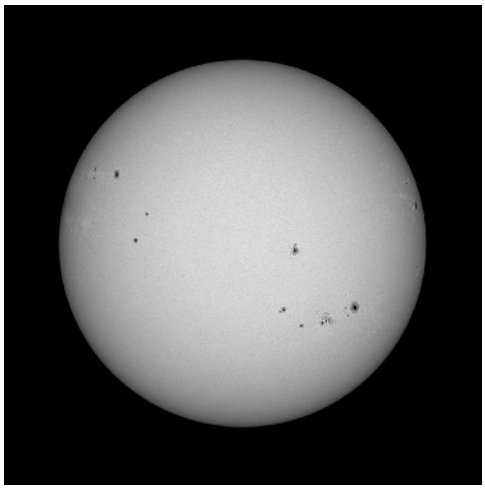
Members' Universe: David Hoskin's Universe

Solar Prominences captured by **David Hoskin**, June 27, 2025
ZWO ASI290M camera, Lunt 40mm f/10 solar telescope with Explore Scientific 2X focal extender, and Celestron SLT mount used to obtain 1000 frames of SER video (gain 405, exposure 0.84 ms/frame; best 100 frames stacked with AstroSurface, wavelets adjusted with Registax, other post-processing with Photoshop and PhotoScape X.

David Hoskin captured the Double Cluster in Perseus, August 6, 2025
Photographed with a Canon T3i DSLR and Canon 50mm lens @ 55mm (ISO-800, 2 min, f/2.5) on a Explore Scientific iEXOS-100 mount; 14 subs and calibration frames were stacked with Sequator, post-processing with Photoshop.

Jupiter-Venus Conjunction
August 12, 2025
Photographed with a tripod-mounted Canon T3i DSLR and Canon 55-250mm lens @ 55mm (ISO-800, 2 sec, f/5). The resulting image was tweaked with Photoshop and Microsoft Photo. Photo by **David Hoskin**

Members' Universe: David Hoskin's Universe



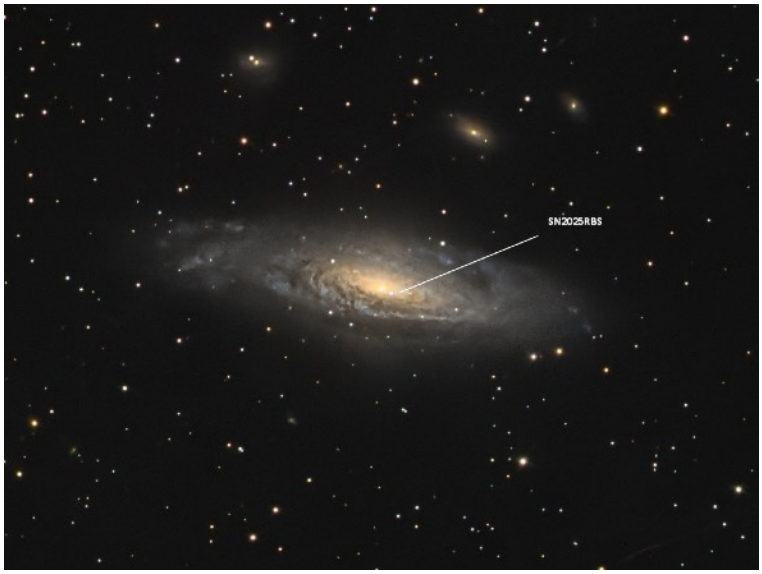
On Sept 1, 2025, **David Hoskin** captured the sun and sunspots,
ZWO ASI533MC Pro camera with Optolong L-Pro filter, SkyWatcher 200mm f/5 reflector with Baader solar filter, SkyWatcher EQ6-R mount used to obtain 1500 frames of SER video (gain 110, exposure 29.25 ms/frame; best 150 frames stacked with Registax, post-processing with Photoshop.

On September 4, 2025, **David Hoskin** captured Titan Shadow Transit.
ZWO ASI224MC camera with UV/IR cut filter, Celestron 200mm f/10 SCT with Explore Scientific 2X focal extender, and SkyWatcher HEQ-5 mount used to obtain 15000 frames of SER video (gain 325, exposure 3.88 ms/frame; best 4500 frames stacked with AutoStakkert, wavelets adjusted with Registax, other post-processing with Photoshop and PhotoScape X.

On September 12 2025 , **David Hoskin** captured the Waning Gibbous Moon.
ZWO ASI533MC Pro camera with Optolong L-Pro filter, SkyWatcher 200mm f/5 reflector, and SkyWatcher EQ6-R mount used to obtain 500 frames of SER video (gain 110, exposure 17.24 ms/frame; best 100 frames stacked with Registax, wavelets adjusted with Registax, other post-processing with Photoshop and Microsoft Photo.

Comet C/2025 A6 Lemmon, October 12, 2025 @ 5am captured by **David Hoskin**
A Dwarf 2 smart telescope was used to capture and stack 120 subs (gain 80, 10 sec); post-processing with Siril, Seti Astro Suite, and Photoshop.

Members' Universe: Blair MacDonald



Blair shares: "The target (NGC7331) was low in the east for this shot as I had to start early because cloud was moving in later in the evening. I only managed an hour on the target, and most of that was through a smokey haze due to summer forest fires."

SN2025RBS / NGC7331 (left)
by **Blair MacDonald**
July 25, 2025
Exposure: 1 hour (6 X 10 minutes)
Bortle 4 to 5 skies, very poor seeing with obscuring smoke and high cloud
Marion Bridge, Nova Scotia

RA: 22:37:06
Dec: +34:25:07
Gain:100
Camera: Zwo ASI2600MC-Pro
Optics: Prime focus of a SkyWatcher Esprit 120 f/7 APO refractor with a focal length of 840 mm
Filter: None

Processed entirely in PixInsight using several plug-ins, Blur Exterminator for deconvolution, Noise Exterminator for noise reduction, GHS for stretching, Seti-Astro suite for gradient removal and StarNet++ to produce a starless image.

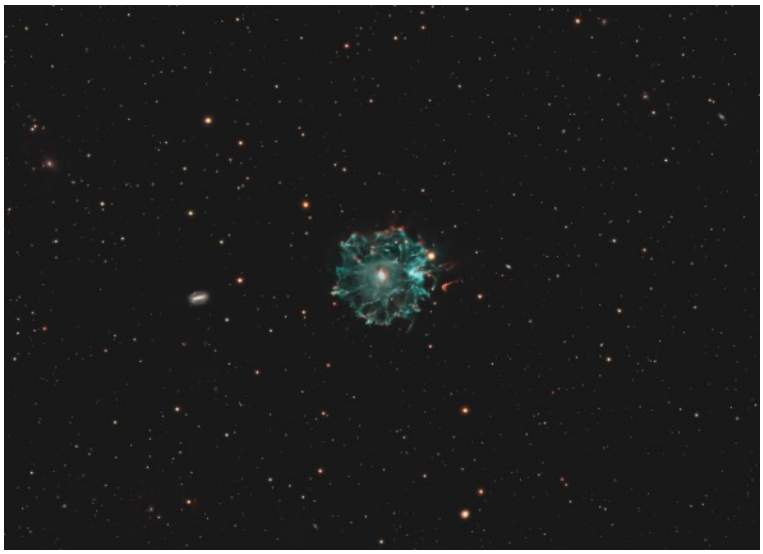
The type Ia supernova was discovered by GOTO (USA) and is located in a nearby spiral galaxy, NGC7331, about 40 million light-years away."
For details, visit: http://astrophotography.ddns.net/OneDrive/WebSite/ActualSiteFiles/gallery/SN2025RBS.html

NGC6543, known as the Cat's Eye Nebula (right) by **Blair MacDonald**
August 1, 2025
Exposure: 2 hours 55 minutes (70 X 150 seconds)
Bortle 4 to 5 skies, good seeing
Marion Bridge, Nova Scotia

RA: 17:58:36
Dec: +66:38:16
Gain: 100
Camera: Zwo ASI2600MC-Pro
Optics: Prime focus of a SkyWatcher Esprit 120 f/7 APO refractor with a focal length of 840 mm
Filter: Optolong L-eNhance

Processed entirely in PixInsight using several plug-ins, Blur Exterminator for deconvolution, Noise Exterminator for noise reduction, GHS for stretching, Seti-Astro suite for mask generation, GraXpert for gradient removal and StarNet++ to produce a starless image.

For more details, visit http://astrophotography.ddns.net/OneDrive/WebSite/ActualSiteFiles/gallery/ZwoNgc6543.html



Members' Universe: Blair MacDonald

Fireworks Galaxy NGC 6946 (left)
by **Blair MacDonald**
August 21, 2025
Exposure: 4 hours and 50 minutes (29 X 10 minutes)
Bortle 4 to 5 skies, reasonable seeing
Marion Bridge, Nova Scotia

RA: 20:34:59
Dec: +60:09:55
Gain: 100
Camera: Zwo ASI2600MC-Pro
Optics:Prime focus of a SkyWatcher Esprit 120 f/7 APO refractor with a focal length of 840 mm
Filter: None

Processed entirely in PixInsight using several plug-ins, Blur Exterminator for deconvolution, Noise Exterminator for noise reduction, GHS for stretching, Seti-Astro suite for gradient removal and StarNet++ to produce a starless image.
For more details, visit: http://astrophotography.ddns.net/OneDrive/WebSite/ActualSiteFiles/gallery/ZwoFireworksGalaxy.html

Cocoon Nebula, IC5146, in Cygnus (right)
by **Blair MacDonald**
August 23, 2023
Exposure: 3 hours (12 X 15 minutes)
Bortle 4 to 5 skies, good seeing
Marion Bridge, Nova Scotia

RA: 21:53:32
Dec: +47:16:03
Gain:100
Camera: Zwo ASI2600MC-Pro
Optics: Prime focus of a SkyWatcher Esprit 120 f/7 APO refractor with a focal length of 840 mm
Filter: Optolong L-eNhance

Processed entirely in PixInsight using several plug-ins, Blur Exterminator for deconvolution, Noise Exterminator for noise reduction, GHS for stretching, Seti-Astro suite for mask generation, and StarNet++ to produce a starless image.

For more details, visit http://astrophotography.ddns.net/OneDrive/WebSite/ActualSiteFiles/gallery/ZwoFilteredCocoonNebulaRedo.html

PUZZLE CORNER – COMETS

Unscramble

By Lisa Ann Fanning

Can you unscramble these terms related to Comets?
Solution will be in the next edition of *Nova Notes*.

A	E	H	I	L	N	O	P				
B	I	O	R	T							
C	D	E	I	I	O	P	R				
A	E	E	I	L	L	N	R	R	S	T	T
A	E	H	L	L	Y						
E	E	H	I	I	L	M	P	R	U		
C	E	L	N	S	U	U					
A	G	G	I	N	N	R	S	U	Z		
E	I	K	P	R	U						
C	D	L	O	_	O	O	R	T	U		
A	A	E	H	K	K	T	U	Y			
A	C	M	O								

Answers to Last Edition's Puzzle

A	L	L	O	O	P										Apollo
A	N	R	S	T	U	___	V								Saturn V
A	A	A	C	D	M	N	R								Canadarm
A	A	B	B	D	E	N	___	O	O	R	R	R	T		Roberta Bondar
A	C	E	E	H	___	L	P	S	S	T	T	U			Space Shuttle
A	E	E	H	K	O	R	S	T	V						Tereshkova
A	D	E	L	L	___	M	N	O	R	U	U				Lunar Module
I	K	N	P	S	T	U									Sputnik
A	B	D	I	___	L	N	R	U	Z	Z					Buzz Aldrin
A	C	D	D	E	___	F	H	H	I	I	L	R	S		Chris Hadfield
A	A	C	E	I	___	N	O	P	S	S	T	T			Space Station
A	D	E	I	L	___	L	R	S	Y						Sally Ride

September 06, 2025 RASC Halifax Centre Meeting:

(29 attendees)
To watch a replay of the meeting, please visit: https://youtu.be/Lnw8Kjf-V68?si=sAwmCqVltkMqHDbP on the RASC Halifax YouTube Channel.

Welcome - David Hoskin
RASC Halifax Director, Observing / EPO Chair and program emcee David Hoskin welcomed everyone to the monthly meeting, shared the Indigenous Land Acknowledgement and read the Centre's inclusivity and diversity statement and reviewed the Agenda.

David Hoskin - Photo Montage
David presented photographs and sketches from Centre members Jerry Black, Michael Boschat, Barry Burgess, David Chapman, Jeff Donaldson, Tim Doucette, Lisa Ann Fanning, David Hoskin, Paul Gray, Cassandra Litwinowich, Blair MacDonald, John McPhee, Norman Schneiderman, Darren Talbot, and Kathy Walker.

Special Guest - David Hoskin - All-in-One Smart Telescopes
The first smart telescopes from Unistellar and Vaonis, which were introduced several years ago, showed promise but were too expensive for the average amateur astronomer. The smart telescope market has recently exploded with updated models from Unistellar and Vaonis being joined by affordable smart telescopes from Dwarf Labs and ZWO. In addition, Celestron is introducing a high-end smart telescope to compete with offerings from Unistellar and Vaonis. David presented an overview of several all-in-one smart telescopes that are currently available.

BGO "Merch" Announcement - Tiffany Fields
There is a plan to order BGO "swag." Any "profit" will be used for BGO tours and/or student scholarships. Deadline for ordering is September 18. Targeting October for delivery.

Photo (right): Tiffany Fields announces a new line of BGO "merch" at the September meeting. Photo by David Chapman

Paul Heath - Food for the Soul - *Alien?*
Paul presented his latest poem, *Alien?*, which can be read on page 16 of this edition of Nova Notes. His poem was based on the Atlas Comet.

Update from the Board presented by Judy Black, Secretary of RASC Halifax Centre
Support SCO with the Dave Lane Memorial St. Croix Observatory Property Endowment (SCOPE) Fund - there are $10,000 worth of matching funds available thanks to Michelle Lane and Tony Schellinck.

Nova Notes - May/June 2025 edition is posted in "Publications"
Deadline for September/October edition is October 20. Send your content to novanoteseditor@halifax.rasc.ca

16th Annual Kejimkujik Dark-Sky Weekend was held. (Annual Report will contain a detailed report of the weekend.)
Highlights:

- Two of the three nights were clear
- Evenings at Sky Circle had 330 attendees on Friday and 300 on Saturday.
- Afternoons at Merrymakedge had about 175 attendees.
- Many thanks to volunteers - Daphne Themelis, Judy & Jerry Black, David Hoskin, Wayne Mansfield, Chris Young, Matt Dyer, John Read, Andrea Misner and Kevin Mogk.

37th Annual Nova East Star Party

- Logo /T-Shirt design by Lisa Ann Fanning. T-Shirts were very popular at the event.
- Thanks to Atlantic Photo Supply for their donation of the door prize - a Sky-Watcher Heritage 150P tabletop Dobsonian. John Read, who gave the public talk *Stories from Space*, won the telescope and donated it to a visitor from Ottawa Centre's 12-year old granddaughter.
- Thanks to speakers Dave Chapman (Exit Pupil, Sundials workshops), David Hoskin (Telescopes and Walk the Solar System), Gerry Brosky (Anatomy of the Eye) and Peter Hurley (RASC Laser Pointer Training).
- The focus was Look Up! (In four stages):
    - Sky Tour (Chris Young, Gary Weber)
    - Binoculars (Tony Schellinck, Judy Black)
    - Telescopes (Kathy Walker, Paul Gray, Karen Hamblin, Jerry Black, David Hoskin)
    - Astroimaging (Smart Telescopes)
- And the Sherman Williams Memorial Bird Walk was led by Pat Kelly. Despite the woods ban, participants walked the roadways and observed birds and plants alike!

SCO Observing Nights are postponed until the end of the woods ban.

Annual BBQ at SCO - Postponed until end of the woods ban.

The library is now discontinued - books have been relocated to SCO and will be for sale once SCO is accessible. To view a list of available books, visit the website. Profit from the sale of the books will go to the SCO maintenance fund.

Reminder: RASC Awards deadline for submission for 2026 is December 31, 2025.
Members are encouraged to review the Observing and Astroimaging certificate programs as well.

Reflect Orbital

- Email from the national discussion list August 30
- Plan to launch giant mirrors into orbit. People pay to shine reflected light down from orbit.
- Each of the 4,000 satellites are four times as bright as the Moon.
- Reflect Orbital has filed with the FCC to launch their first satellite.
- The American Astronomical Society (AAS) has started a questionnaire to gather a list of people who do NOT want a light shone on them or their astronomy research facilities.
- The main question: how the proposed satellite constellation would affect your involvement in astronomy. See email for link to questionnaire

RASC Halifax Centre Board of Directors (led by President Tony McGrath) next meeting is September 30, 2025

RASC National Council (led by Chair Judy Black) next meeting is September 7, 2025.

The next Member & Public Meeting - October 4 - IN PERSON!
Special Guest Speaker - Dr. Sara Seager, OC *From Lab to Cosmos: Three Frontiers in the Search for Life Beyond Earth.*
RSVP will be required for in person attendees.

David Hoskin (EPO/Observing Chair) - What's up in the September Night Sky
David reviewed highlights of the September sky. He highlighted the Sun, solar activity, the Moon, and targets needed to check off for Explore the Universe, and when they can be viewed. He also highlighted planetary positions, constellations, stars (including double and multiple) and deep sky objects. Each month, you can find David's presentations on the homepage at http://halifax.rasc.ca.

October 4, 2025 RASC Halifax Centre Meeting:

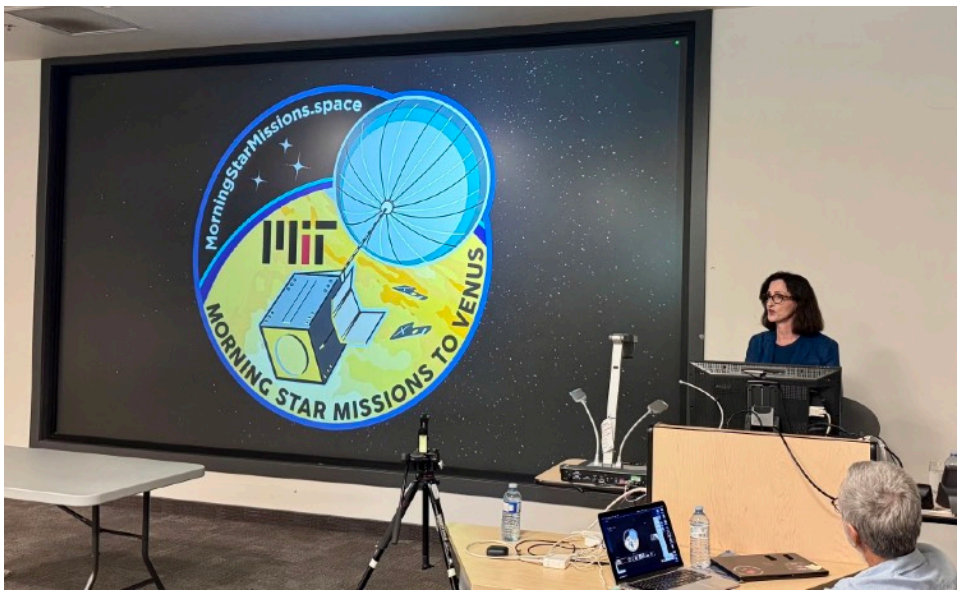
(64 attendees)
To watch a replay of the meeting, please visit: https://youtu.be/wnj0eyUzzVU?si=NuV0l3lhteuMgWbc on the RASC Halifax YouTube Channel.

Welcome - David Hoskin
RASC Halifax Director, Observing / EPO Chair and program emcee David Hoskin welcomed everyone to the monthly meeting, shared the Indigenous Land Acknowledgement and read the Centre's inclusivity and diversity statement and reviewed the Agenda.

David Hoskin - Photo Montage
David presented photographs and sketches from Centre members Jerry Black, Jeff Donaldson, Tim Doucette, Paul Gray, David Hoskin, Blair MacDonald, Tom McIntyre and Kathy Walker

Special Guest - Dr. Sara Seager, OC
From Lab to Cosmos: Three Frontiers in the Search for Life Beyond Earth
Dr Seager gave her talk about her groundbreaking research ranging from exoplanet atmospheres to innovative theories about life on other worlds.

About Dr. Seager: Canadian-American Astronomer & Planetary Scientist Senior research staff at the Carnegie Institution of Washington (4 yr) Institute for Advanced Study in Princeton, NJ (3 yr); Professor at MIT known for the work on extrasolar planets and their atmospheres; Honorary President of the RASC (2022 -); Chair of the NASA Science & Technology Definition team for proposed mission "Starshade" Since 2020, focused on Venus and its atmosphere.



Dr. Sara Seager
Photo by David Chapman

Paul Heath - Food for the Soul - *Breath*
Paul presented his latest poem, *Breath*, which can be read on page 16 of this edition of Nova Notes.

His poems are based on the topic of the day.

Update from the Board presented by Judy Black, Secretary of RASC Halifax Centre

Extended greetings to the Dalhousie and SMU students attending the day's meeting.

Support SCO with the Dave Lane Memorial St. Croix Observatory Property Endowment (SCOPE) Fund - there are $10,000 worth of matching funds available thanks to Michelle Lane and Tony Schellinck.

Nova Notes - May/June 2025 edition is posted in "Publications".
Deadline for September / October edition is October 20.
Send your content to novanoteseditor@halifax.rasc.ca.

SCO Observing Nights Next date is October 21. If there are cancellations, notifications will be sent out.

Reminder: RASC Awards deadline for submission for 2026 is December 31, 2025. Visit https://rasc.ca/rasc-awards for more information.

Don't forget to review the available Observing and Astroimaging certificate programs as well.

Halifax Centre Astrophotography Contest - Categories are Deep Sky, Solar System, Wide Field & People's Choice. The deadline is November 11.

Governance
Revisions: Policy PD6: revised Position Description (appointed) National Council Representative
New: G16: Regarding Education and Public Outreach (EPO) Events Personal Expense Reimbursement.

RASC Halifax Centre Elections at AGM: President, Vice-President, Secretary, Treasurer, 6 Directors (Deadline for Nominations is October 31. The appointed positions will be approved by the Board in January 2026.

You can reach President Tony McGrath at president@halifax.rasc.ca.
The next board meeting will be October 28.

RASC National Council representative chair Judy Black secretary@halifax.rasc.ca.
Next RASC National Council meeting is October 19.

From Stargaze Nova Scotia:
A binocular party will be held October 17 (cloud dates 18/19) at 8 p.m. at 5933 Prospect Rd. Tickets at https://learntostargaze.as.me/schedule/aee2f3ac.

Next Member & Public Meeting November 1.
Speaker Pat Kelly, FRASC: *Telling Time in Scotland: from stones to sundials*

Happy World Space Week on October 4-10.

David Hoskin (EPO/Observing Chair) - What's up in the October Night Sky
David reviewed highlights of the October sky. Days are getting a lot shorter, great for observing!

He highlighted the Sun, solar activity, the Moon, and targets needed to check off for *Explore the Universe*, and when they can be viewed. He also highlighted planetary positions, constellations, stars (including double and multiple) and deep sky objects.

Additionally, two comets are becoming visible: Comet C/2025 A6 (Lemmon) and Comet C/2025 R2 (SWAN) which is giving good views from the Southern Hemisphere. Maximum predicted magnitude is 9.1.