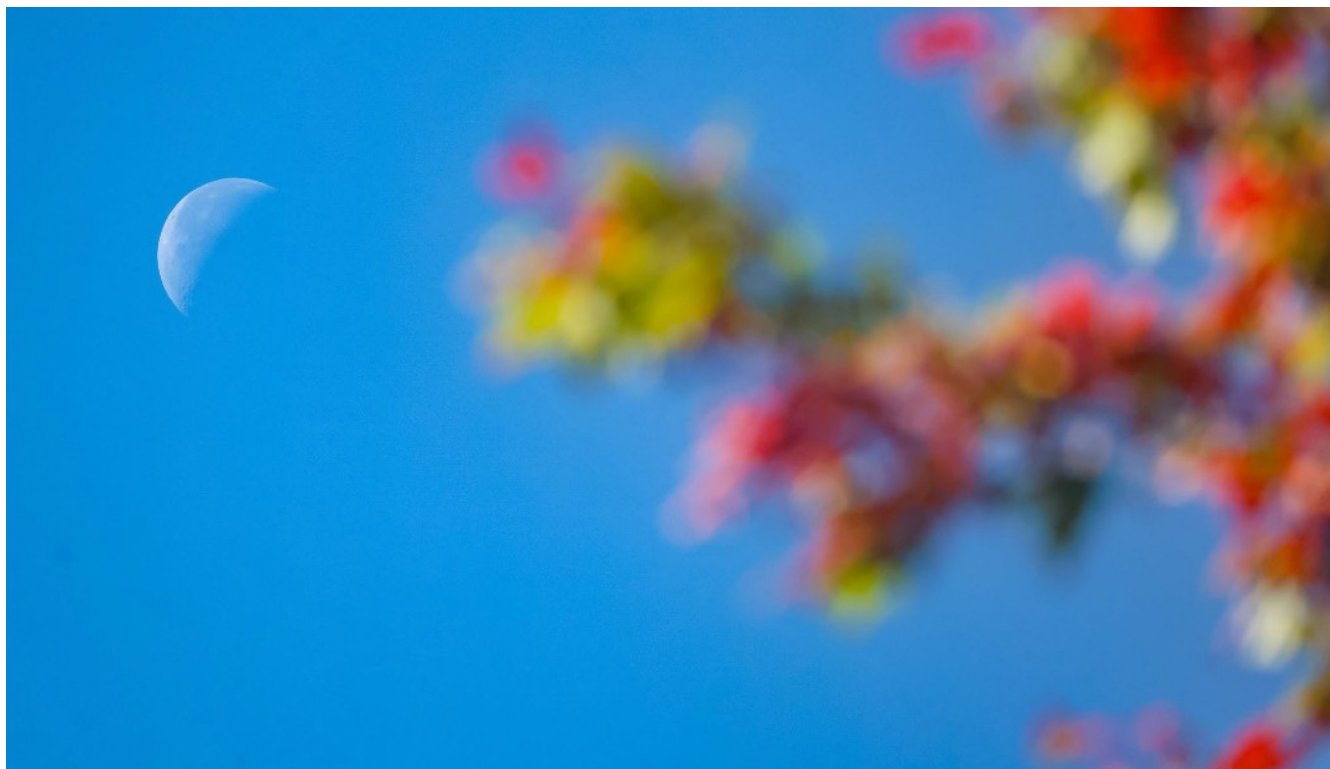


Nova Notes

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

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“October Moon”

SEP / OCT 2026

VOL 57 NO 4



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PLUS ALL YOUR FAVOURITE REGULAR FEATURES!

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Cover Images:

Main Image:

"October Moon" - The waning crescent Moon hangs over the autumn leaves on Oct. 4, 2026, in Eastern Passage.

by John McPhee

Thumbnail:

St. Croix Observatory
drawing by Mary Lou Whitehorne

Note: All photos and original works in this edition are the copyrighted property of the photographers, writers and artists. Permission to use any of their photos for other purposes must be obtained from the photographer.

From the Editor

Welcome back to Nova Notes after our summer hiatus!

It was a busy one for Halifax RASC members judging by the images and videos presented to our Facebook group and at monthly meetings that resumed in September.

Members also took part in the annual Dark Sky Weekend at Kejimikujik National Park and the Halifax centre's Nova East star party at Smileys provincial park.

Other public outreach included a partial solar eclipse viewing at Saint Mary's University observatory organized by BGO manager Tiffany Fields.

We enjoyed a wealth of dramatic astronomical events this summer and fall, including partial solar and lunar eclipses, conjunctions and occultations, and a Perseid meteor shower on a clear moonless night.

Folks with cameras (including myself at least in the wide-field world) collected an eye catching record of the busy astronomical summer, as the many photos that fill the subsequent pages will attest.

I continue to be awestruck by the quality of the astrophotography produced by our members. Advances in capture and processing technology have certainly helped, but it still takes talent and effort to make these amazing images (and yes time-lapses, Jerry Black.)

I was about to dive into the deep sky astrophotography pool a few years ago but my body had different ideas. My immune system went off the rails with one consequence being chronic fatigue. By the time early evening rolls around, I'm usually ready for bed.

So I haven't spent a night under the stars with or without a photography set-up in a long time. But once in a while, usually when I'm on vacation away from the city lights, I make the effort to stick my DSLR on a tripod and take some 30 second exposures of the Milky Way or favourite constellations.

And that technological thing I mentioned has put a pretty good camera in my hands in the form of my cellphone. I can take some decent shots of constellations and the Moon in the sunset, for instance, standing on the balcony and letting the phone's image stabilization and time exposure software do its work.

But most times I use my built-in visual sensory equipment to enjoy our celestial neighbourhood. Even a brief while under the stars on a lounge is a balm for the soul.

Enjoy our September/October 2026 edition and clear skies!
- John McPhee

Upcoming Meeting Dates

November 7- Finding Exoplanets (Blair MacDonald) and Mary Lou Whitehorne - SCO: Crap-tastic Toilet Training. If astronauts can do it, so can astronomers.

December 5 & AGM - John Badowski (the Fermi Paradox)

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>



St. Croix Observatory

Part of your membership in the RASC Halifax Centre 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.)

RASC Halifax Centre Board of Directors, 2026

Elected	
President	Tony McGrath
Vice-President	Peter Hurley
Secretary	Judy Black
Treasurer	Gregg Dill
Director	Gerry Brosky
Director	Matthew Dyer
Director	David Hoskin
Director	Frank Logan
Director	David McMullin
Director	Vacant
Appointed	
Honorary President	Patrick Kelly
Auditor	David Chapman
Communications Committee, Chair	VACANT
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	Judy Black
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 2027!

Dark-Sky Weekend
Coming Soon!

2 New Moons in August 2027!

Nova East Star Party
Coming Soon!



A Message from the President

Observing Journals

I have discovered that one of the most valuable pieces of astronomy equipment that I own are my observing journals. I used to call them observing logbooks, but as I look back through them now preparing my application for my first observing certificate, I think they are more appropriately called observing journals. They record much more than just what I observed. My journals have taken me on a stroll down memory lane that ranks as one of the enjoyable aspects of pursuing the certificate.

My first recorded observation was on 28 December 2001 when I observed Jupiter and Saturn from my backyard. Since that time I have accumulated 5 observing journals. These hardcover notebooks record more than just the observations. They are a personal history and a record of my journey as an amateur astronomer, recording not only the observations but also the people and places where observations took place as well as the occasional nod to the person who put me on the right path to the object I was looking for but could not find.

Notable here are Dave Lane, Gary Weber, Michael Gatto, Daryl Dewolfe and Darren Talbot who prevented me from being skunked on a number of occasions. Thank you gentlemen! Other notable things from these journals:

My first trip to SCO was 4 January 2002 where I met Dave Lane, Gary Weber and Daryl Dewolfe for a night of observing.

- First light for RASC Halifax Centre 17" Dobsonian Telescope was at SCO on 12 April 2002 and the target was M51.
- Every night of observing at SCO filled several pages.
- At Smileys on 10 August 2002, Roy Bishop showed us:
 - How to find Venus naked eye in the daytime sky
 - Daytime view of Antares through his Astro-Physics refractor
 - Hydrogen Alpha views of the Sun through the Astro-Physics refractor
- On 8 June 2004, I observed the Transit of Venus from Signal Hill at St. John's NL through a 70mm refractor, 114mm reflector & 200mm SCT.

This experience has shown me the real value of an observing journal. It is much more than a collection of sketches and a log of celestial objects. Over the years, it evolves into a diary of your life in astronomy, and flipping through the entries places you back on the observing field at Smileys or in the roll-off at St. Croix recalling the friends and mentors who shared the eyepiece views and the conversations. In some ways these details are as meaningful as the observations themselves, reminding us that astronomy is not only about the objects we observe, but also about the experiences we share.

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.

Stars, Meteor Showers and a Lightning Storm! Who could ask for more?

By Judy Black

On August 12-15, 2026, RASC Halifax Centre members and non-members alike gathered at Smiley's Provincial Park for the 38th Nova East Star Party. Some travelled from as far afield as Ottawa, New Hampshire and New Jersey to attend. If you weren't there, you missed a lot of excitement!



At Paul Gray's suggestion, the start date of the Star Party was moved to two days before the usual start day to accommodate observing and recording the Perseid Meteor Shower. Shortly after arrival on Wednesday, August 12, some members set up scopes to watch the partial solar eclipse. First contact was just a few minutes before 2 PM ADT and the last contact was

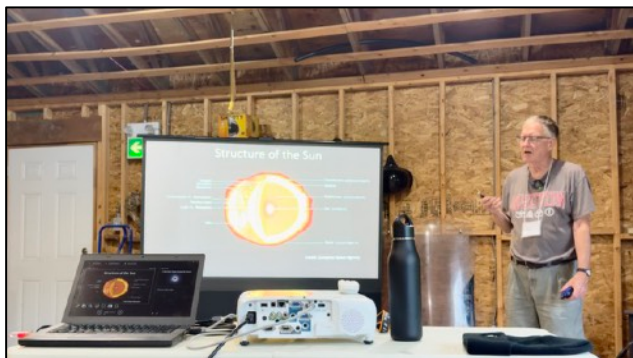


just before 4 PM ADT. The time of maximum eclipse was 2:59 PM ADT local time. Every 10 minutes, I made a rough sketch as to where the Moon hid the Sun. No changes in temperature, no notable changes in the day's brightness/darkening, and certainly not enough change for birds to stop singing. Some in attendance basically said, "Meh, it's only a 30% partial. It's not a total eclipse." However, I was excited to see it and to follow and sketch the lunar path across the Sun, even if only a partial. Jerry created a timelapse of the eclipse. <https://www.youtube.com/watch?v=WggH5vIxFI>

Early in the evening of August 12/13, Paul had given a mini-workshop to explain how to observe the showers and how to report them on the recording sheets. The night was very clear to look up and visually capture the meteor location, duration and colour. While observing, the cows in the fields adjacent to the Park were mooing, giving us some chuckles and comfort in the darkness. There was even a surprise launch from Florida and an amazing Space X rocket stage separation and fuel dump; this photo shows it in the direction of Corona Borealis and the Keystone of Hercules (<https://vimeo.com/1220908559?share=copy&fl=sv&fe=cj>).



Thursday saw cloudy skies and the first of two absolutely incredible thunder-lightning storms. Some participants left for home in the morning knowing it was to be quite wet that afternoon and overnight, but some of us stuck it out. Tony McGrath, Jerry and I were in our tent shelter during the early part of the storm just after lunch but decided it would be safer to sit in the car. We were there for over an hour as this storm raged – heavy rain, strong winds and lots of thunder and lightning. We had a bit of reprieve and a break in the clouds for the evening's dinner and socializing before heading back to our tents for sleep. However, around 1 AM the storm began raging again. There were a few times when counting the seconds between the lightning and thunder we couldn't even finish saying "one", which is really scary considering there is only a thin fabric tent separating you from the elements. They were just a little too close for comfort and, no, the cows were not mooing in the field that night nor the next morning. Suffice to say there was no observing or astroimaging at any time on Thursday!



The skies cleared on Friday morning; the clouds and the threat of future rain were disappearing. Tony McGrath with help from Mark Mander personned the registration desk prior to the Friday night presentation by David Hoskin - *Safe Solar Observing and Imaging*. David described indirect methods (pinhole and solar projection), the use of certified solar filters for safe visual use, the use of front-mounted white-light filters for observing or imaging the Sun with

telescopes (and binoculars), and the use of dedicated solar telescopes tuned to the hydrogen-alpha wavelength in order to reveal solar filaments, prominences and flares.

Following the Astro-Breakfast on Saturday morning, Jerry Black (with input and photos from Peter Hurley, David Hoskin, David McMullin, and Bob Russell) presented "*He who dies with the most toys wins*" or "*A serious tool for a multitude of usage*". Jerry provided photos and outlined capabilities of the Seestar S30, S30Pro, S50 and Dwarf 2 and 3 smart scopes and some of their experiences with them.

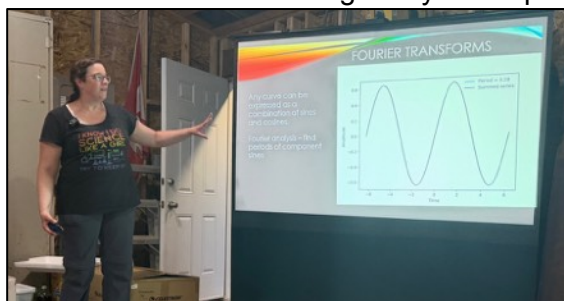


This was followed by a walk through our solar system with a twist. David Hoskin and Frank Logan extended the walk and invited participants to join them *Walk Through our Solar System to Alpha Centauri*. David provided a tour through a scaled Solar System model to Neptune then Frank took us the extra distance to Alpha Centauri. Never did 4.3 light years take so little time to travel! Maybe we travelled in warp speed? There was even a prize awarded at the end of our journey – a Solar System planetary orbit orrery – won by Peter Hurley. Well done, David and Frank!

Following the announcement of this year's RASC Observing Certificates, David XXXVII Hoskin and David XVII Chapman inaugurated David McMullin into the Royal Astronomical Society of Daves (RASD). The inductee was asked three skill-testing questions that he answered with no difficulty. McMullin shall forever more be known as David XL McMullin. Congratulations, David XL!



Our keynote presenter on Saturday evening was Dr. Catherine Lovekin from Mount Alison University in Sackville, NB. In her presentation *Looking at Stars: Beyond the Surface*, she explained how we can use stellar variability to probe the interior structure of stars, allowing us to learn much more about their structure and evolution. Also give her credit for the t-shirt she wore: "I know I do science like a girl. Try to keep up."



Dr. Catherine Lovekin, Keynote Speaker

Friday night was wonderfully clear and Saturday night started fair, got murky and then cleared after midnight. Public observing sessions were conducted both evenings. Chris Young provided a Sky 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 Judy Black with assistance from Chris Young and Karen Hamblin showed how to find the same targets in greater detail through binoculars. Thank you to Tony Schellinck for his guidance and wisdom when plans were being made on how to conduct this session. The 5-telescope Telescope Field showed select items, some seen previously at low power but now visible under high magnification. Telescope operators with various type of telescopes included Jerry Black, Michael Gatto, Paul Gray, Peter Hurley, and Frank Logan.

RASC Halifax Centre and the Nova East Planning Team would like to thank our sponsors: **Atlantic Photo Supply** for very generously providing the Grand Prize (Celestron Star Sense Explorer 130 telescope), and to **Telescopes Canada** for providing two \$200 gift certificates plus two t-shirts, a hoodie and two toques. Many thanks to Dave Chapman, Chris Young, and Mark Mander who, supported by the Centre and other donors, had collected the Door Prizes.

Nova East would not be complete without the **Sherman Williams Memorial Walk**. Pat Kelly led the walk sharing birding and natural plant lore with us while walking along the wooded trails and roads within the Park. The poison ivy patch was very notable.

The Planning Team would like to thank Paul Gray for suggesting we extend the dates to incorporate the meteor shower observing session. There were members and a few non-members who came specifically for that session alone. We would also like to thank our local members for sharing their expertise and for their time in developing their presentations: Jerry Black, David Hoskin, Pat Kelly, and Frank Logan.

I would be remiss if I did not thank my fellow members of the 2026 Nova East Planning Team for their dedication to ensuring a successful 2026 Nova East Star Party. In alphabetical order: Dave Chapman (prizes, AV support), Gregg Dill (Treasurer), Michael Gatto (Nova East logo, telescope field), Frank Logan (Nova East T-shirt logo, telescope field), Mark Mander (prizes), Tony McGrath (Registrar), and Chris Young (prizes, astro-breakfast). Each contributed in more ways than noted, ways during the planning phases of this event and on-site during Nova East. For that I am very grateful.

We welcome any member who would like to join the Planning Team, be they new to the Centre or an experienced RASC member. Contact me if you have questions, or if you're interested.

Respectfully submitted,
Judy Black, Chair
Nova East Planning Team

The Seestar S50 Pro - An interesting companion to the S30 Pro

By Jerry Black

While I had the S30 Pro in hand for a while, the announcement of the S50 Pro tempted us with higher resolution and enhanced detail compared to its predecessor. A few of us, especially those with the original S50 jumped on the opportunity to update our equipment. The S50 Pro so far is producing sub images more reliably than the S50 with exposure times up to 60 sec. This is a more satisfying experience and lets us inspect the strengths of each field of view..

Side by side: the S50 Pro and the S30 Pro

Both scopes carry the same 4K sensor with 2.9 μm pixels, so the difference comes down to the optics. The S50 Pro's 260 mm focal length works out to about 2.3" per pixel, against roughly 3.7" per pixel for the S30 Pro at 160 mm. The S50 Pro frame therefore covers only about 62% of the width of an S30 Pro frame, but resolves noticeably finer detail. Below are the targets I have shot with both.

Gamma Cygni Nebula (IC 1318)

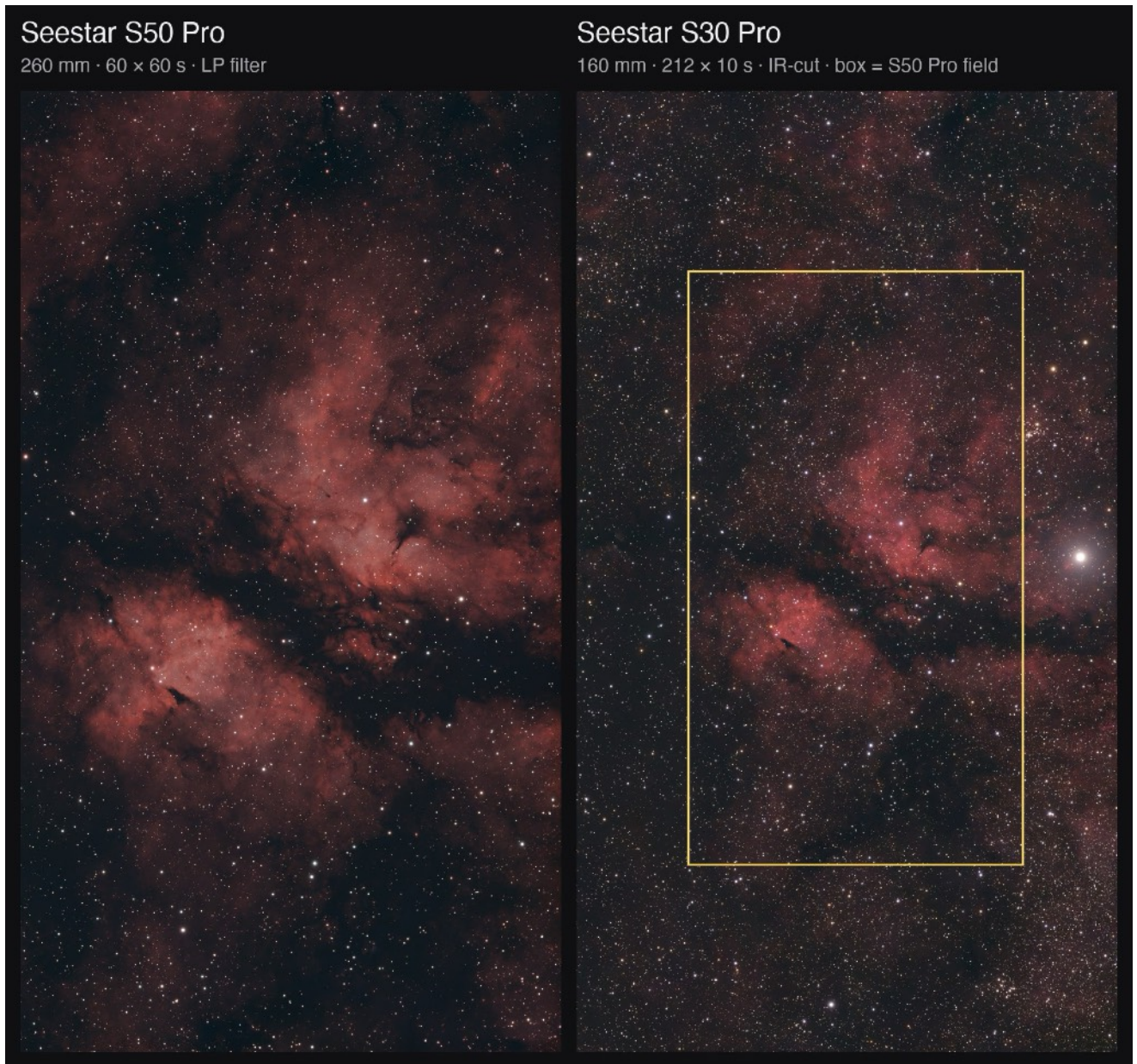


IC 1318, commonly called the Gamma Cygni Nebula or the Sadr Region, is a large emission (HII) nebula in Cygnus surrounding the bright star Sadr (Gamma Cygni) as seen in projection, though the two are not physically associated: Sadr itself lies roughly 1,800 light-years away, while the nebula is much farther, at around 4,900 light-years. The nebula is ionized by a hot, heavily obscured O-type star and spans over 100 light-years.

Total image time was 1 hour and 4 minutes.

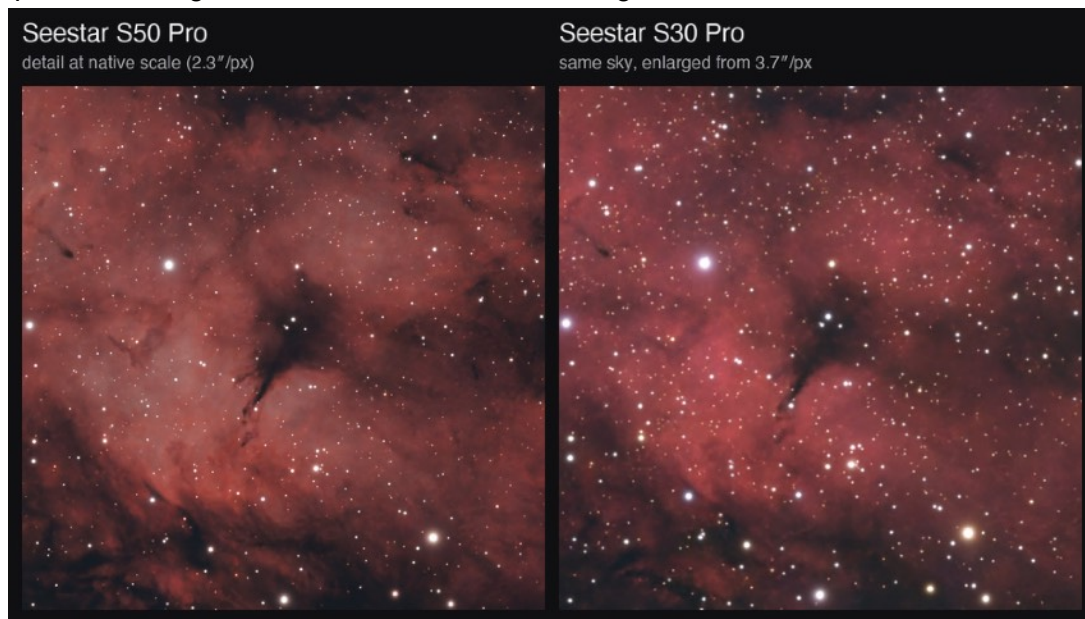
CAPTURE	
Moon Phase	Waning Crescent
Camera	Seestar S50 Pro (4K Sony IMX585 sensor)
Optics	260 mm focal length, f/5.2, 50 mm aperture
Filter	LP
Stacking	StackingWizard, 64 frames
Date	2026-09-08
PROCESSING	
AstroWizard Processing	1. GraXpert background extraction (0.5)
	2. Flatten sky background
	3. True-color mapping
	4. Color calibration
(free, although	5. BlurXTerminator (0.6)
BlurXTerminator and	6. GraXpert denoise (linear, 0.6)
StarXTerminator are	7. NoiseXTerminator (linear, 0.9) (x2)
extra cost add-ons)	8. Stretch (deep)
	9. Generalized Hyperbolic Stretch
	10. Generalized Hyperbolic Stretch (starless)
	11. Star removal (StarXTerminator)
	12. Saturation adjustment
	13. Curves adjustment (x2)
	14. Lighten background (x2)
	15. Star recombination (screen blend)

Both scopes were out on the same night, 8 September 2026. The S50 Pro collected 60×60 s through its LP filter (one hour); the S30 Pro collected 212×10 s through the IR-cut filter (about 35 minutes). The yellow box marks where the S50 Pro's field falls inside the S30 Pro frame.



Seestar S50 Pro (left) and S30 Pro (right), same night, same target.

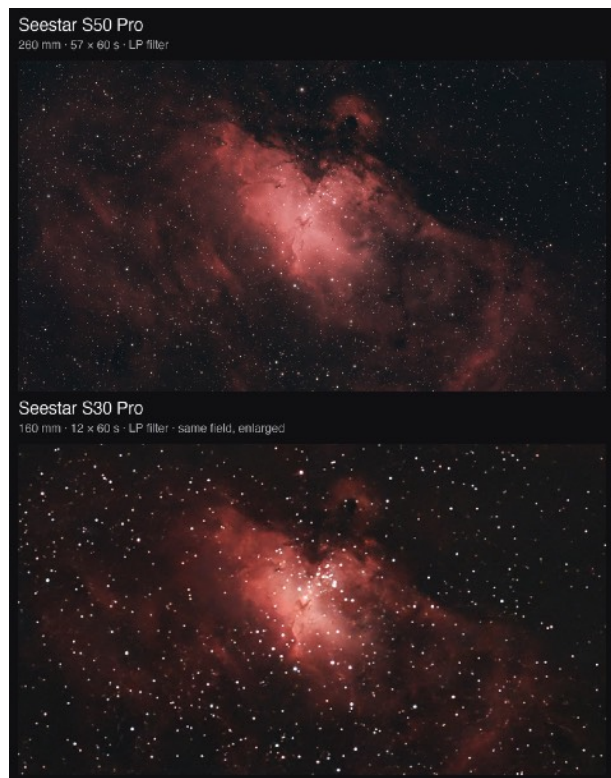
Cropping the same patch of sky around the dark globule and enlarging the S30 Pro version to the same scale makes the resolution difference obvious: the S50 Pro shows the thin dark filaments and keeps the stars tighter, while the S30 Pro rendering is softer with more bloated stars.



Matched-scale detail of the same region.

Eagle Nebula (M16)

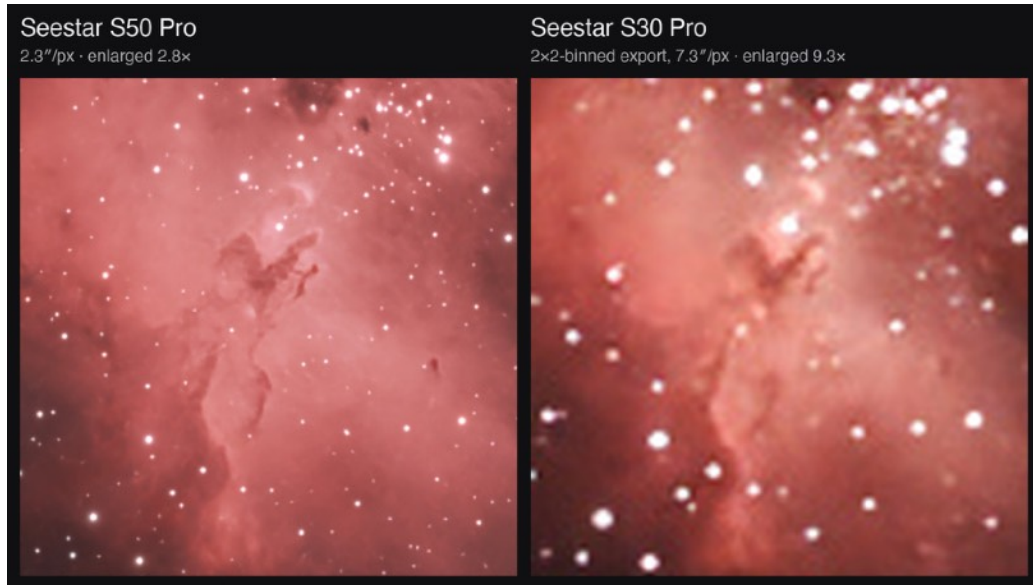
The S50 Pro image is 57 × 60 s from 8 September 2026; the S30 Pro image is 12 × 60 s from 5 August 2026, exported 2 × 2 binned. Both are cropped to the same field. The S50 Pro had far more integration time here, but the extra aperture and focal length show in the Pillars of Creation and the dark structure around the nebula.



M16 with the S50 Pro (top) and S30 Pro (bottom), cropped to the same field.

Zooming in on the Pillars of Creation

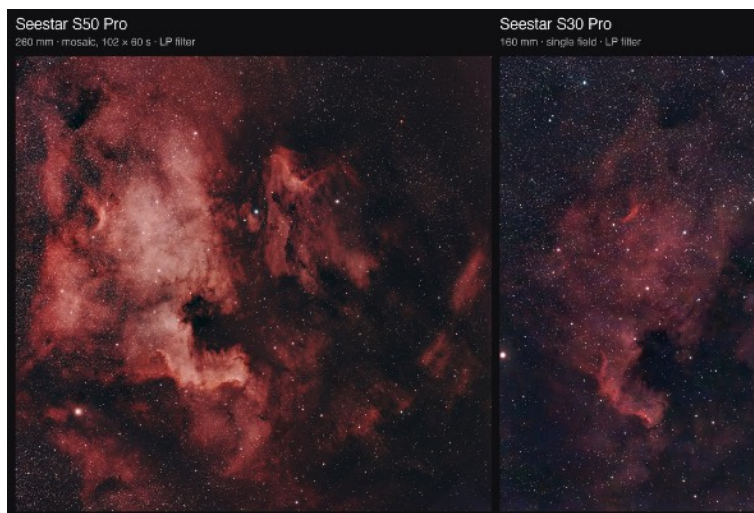
Pushing in on the Pillars at the heart of M16 shows the gap most clearly. The S50 Pro frame resolves the three pillars with defined edges, the bright rims along their tops and the small dark knots around them, and the stars stay small. The S30 Pro export covers the same patch of sky with only about a tenth as many pixels, so the pillars soften into a smudge and the stars swell into discs. Part of that gap comes from the S30 Pro image having been exported 2×2 binned, but even unbinned its 160 mm focal length samples the sky at about $3.7''$ per pixel against the S50 Pro's $2.3''$.



The Pillars of Creation from each image, cropped to the same patch of sky and shown at the same size.

North America Nebula (NGC 7000)

This is where the narrower field of the S50 Pro shows. The S30 Pro takes in the North America Nebula in a single field, while the S50 Pro needed a mosaic (102 $\times$ 60 s, October 2026) to cover it, and in return picks up the Pelican Nebula alongside with much more detail.



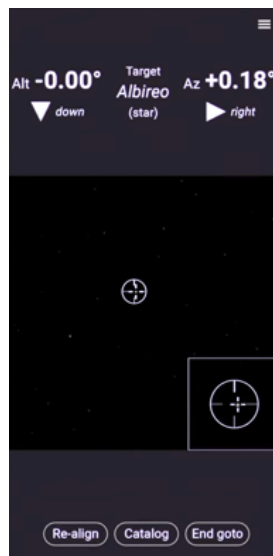
NGC 7000: S50 Pro mosaic (left) and S30 Pro single field (right).

All in all, both are useful smart telescopes. Life would be grand... were it not for the newly announced DwarfLab Draco. More on that from others as they receive their units.

ClearSkies Astro's Hopper™

By Jerry Black

Hopper is an electronic finder that makes pointing your telescope quick and easy. It mounts in your telescope's finder scope Synta/Vixen dovetail socket, temporarily replacing the finder scope. Additional sockets accommodate a variety of telescopes.



We have used Go-To telescopes that reached a target's position without revealing the target. In these cases, it was unclear whether the cause was an alignment error or limitations of the equipment and sky conditions. The Hopper resolves this by ensuring that you are pointing at your intended target.

Hopper captures the sky in your telescope's pointing direction with an integrated camera and uses [Cedar](#) software to analyse star patterns, pinpointing where the telescope is aimed up to 20 times per second (plate-solving). Select a target from Hopper's built-in catalogue of 100,000 deep-sky objects, and it guides you as you manually move the telescope. The phone app continuously updates the distance and direction to your target. Once you arrive, the target should be visible in your eyepiece.

Before first use and whenever you move Hopper to a different telescope, calibrate its field of view against your eyepiece. This one-time calibration for each telescope establishes the camera's offset relative to the eyepiece.

Software updates appear to have resolved the Wi-Fi reliability issues we initially encountered. Hopper requires a USB-C power supply to operate.

Hopper works with SkySafari and Stellarium, updating your telescope's position in either app as you manually move towards a selected target. This provides visual feedback on targets in your area of interest.

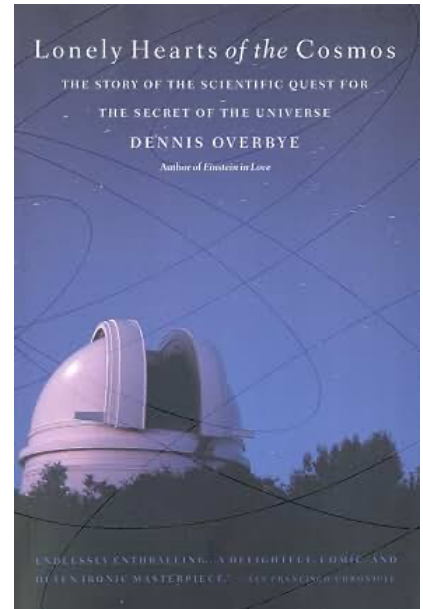
PiFinder is a capable alternative with a built-in screen, battery, and buttons for adjusting settings, so you can use it without a phone. I personally like phone approach as the interface is not tied to a particular setup on the telescope.

Book Review: *Lonely Hearts of the Cosmos: The Story of the Scientific Quest for the Secret of the Universe*

By Tony McGrath

Written by Dennis Overbye in the late 1980's and first published in 1991, the book is the story of how humans have tried to answer the big questions. In the early 20th century humans knew very little about the universe's scale and structure. Cosmology was barely a science at all and people were trying to assemble a picture from fragments. The dominant question was, are the spiral nebulae nearby gas clouds inside our galaxy or separate "island universes"? Also, how old is the universe and is it static or is it expanding? If expanding will it continue to expand, or will it stop expanding at some point and start contracting?

Overbye tells this story not as a sequence of discoveries but as a human undertaking filled with ambition, rivalry, uncertainty, flashes of insight, and long periods of frustration. It was this writing style that I thought was one of the book's greatest strengths. The author avoids turning cosmology into a textbook and instead combines biography, history, and scientific explanation to tell the story as a very human endeavour.



The central figure is Allan Sandage, the astronomer who inherited the challenge of refining the work of Edwin Hubble and measuring the expansion of the universe.

Sandage becomes both the hero and a cautionary figure: A brilliant observer whose life becomes increasingly shaped by the difficult pursuit of answers that remain stubbornly out of reach. Through Sandage and others it becomes clear how scientific progress is very rarely straightforward, and more like a series of ever-decreasing circles spiralling toward the truth.

The cast of characters includes remarkable personalities such as Vera Rubin, whose observations provided early evidence for dark matter; Stephen Hawking whose ideas about black holes transformed cosmology; James Peebles who laid much of the theoretical foundation of modern cosmology; Allan Guth whose inflation theory dramatically changed thinking about the earliest moments after the Big Bang; Fred Hoyle a brilliant, provocative and controversial figure who was never afraid to challenge accepted ideas; John Wheeler who inspired generations of physicists and popularized concepts such as black holes and whose imagination and enthusiasm influenced many of the younger scientists in the book; and finally Yakov Zel'dovich, the leading Soviet cosmologist and principal competitor to Peebles.

The book portrays these people not as distant geniuses but as real people with strengths, flaws, and competing ideas. Overall, *Lonely Hearts of the Cosmos* is an outstanding book for anyone interested in astronomy, physics, or the history of ideas. It is especially rewarding for readers who enjoy understanding not only *what* scientists discovered, but *how* they discovered it — and what those discoveries cost in human effort.

Food for the Soul: The Poetry of Paul Heath

Unseen Shadow

~ Paul Heath

There is a shadow unseen
That brings night within day,
A shadow with fear and unease
And Nature's turning seems undone,
By a slow, steady, unstoppable darkness.

Once fear, its approach would bring,
Now wonder, at the motion of the Spheres,

The shadows approach, today is known
We gather, a spectacle to witness, to see,
Yet deep within unease, the ancient fear
remains.

With the sweeping shadow, nature settles
The shaking unease anticipates,
Yet we stand, in Sunlight's darkness,
And let Wonder, and fear, settle within.



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 remaining proposed dates for the Friday observing nights at SCO in 2026 are Nov. 6 and Dec. 11.

Check the email discussion list or our website (halifax.rasc.ca) for changes in schedule.
<https://halifax.rasc.ca/index.php/observing/observe-with-us>



St. Croix Observatory drawing by Mary Lou Whitehorne

Members' Universe: Frank Logan's Universe

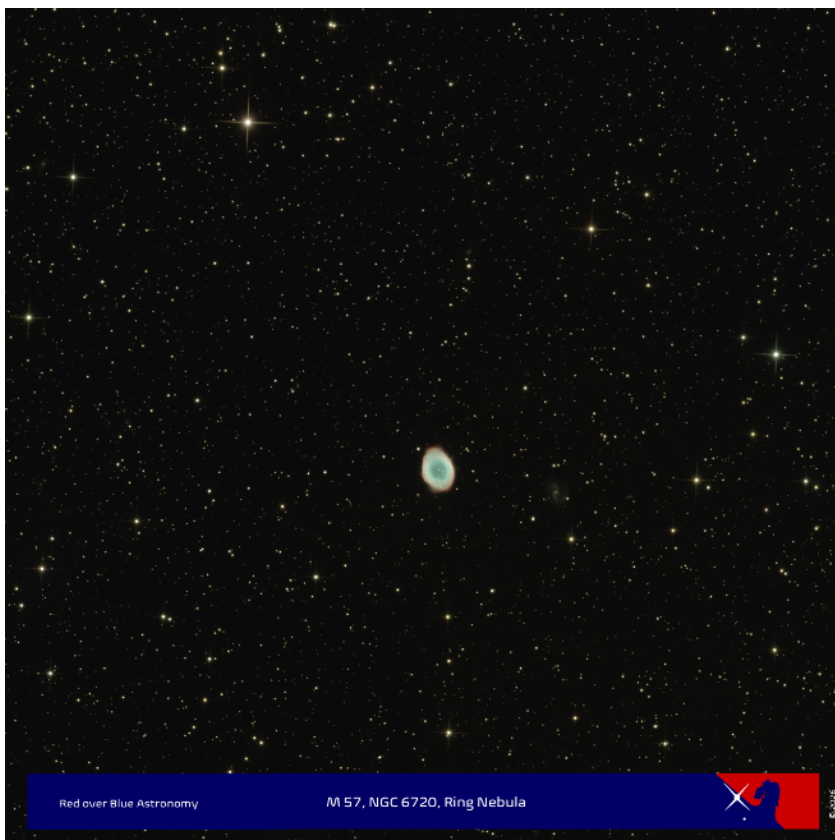


M 101, NGC 5457, Pinwheel Galaxy. Taken over two nights during Nova East. 81x 60sec stacked images; 1.4 hours of data. Player One Saturn-C SQR camera. This was stacked in StackingWizard, and processed in AstroWizard, using some of the RC Astro suite of tools.

Image by **Frank Logan**

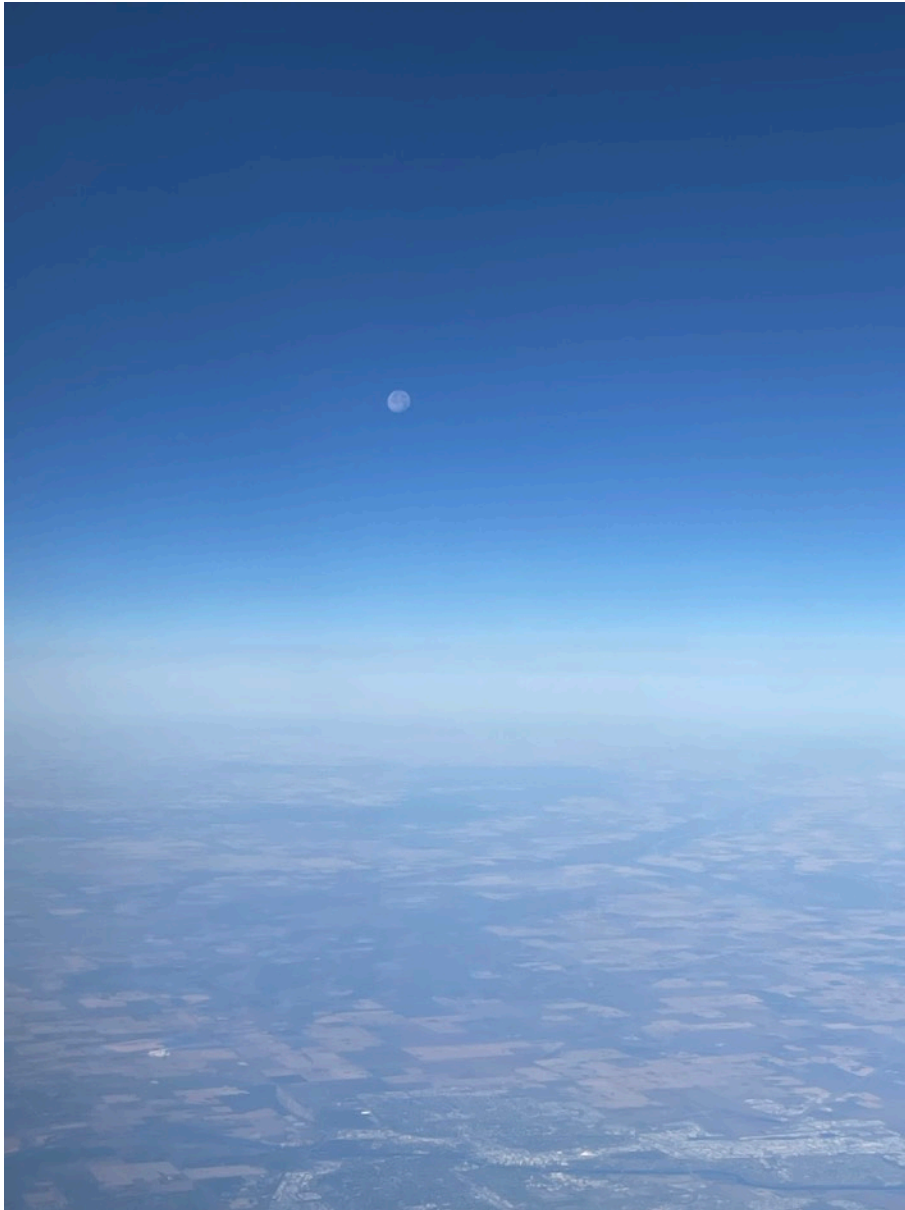
M 57, NGC 6720, Ring Nebula, taken under Bortle 5 (MPSAS reading of 19.56 mag/arcsec²) skies at RASC Halifax Centre's annual star party Nova East held at Smileys Provincial Park and Campground. Player One Saturn-C SQR, and stacked in StackingWizard, and processed in AstroWizard, using some of the RC Astro suite of tools.

Image by **Frank Logan**



Members' Universe:

In The Air with Mary Lou Whitehorne



"Chasing Moonset"

The waning gibbous Moon as seen from 35,000 feet above Saskatoon, SK, heading west, on September 28, 2026, at 9:10 am local time.

It was amazing how long the setting Moon appeared to hang there, "unmoving" and not setting, as my plane flew west over the rotating Earth. From the ground the Moon would have been very near the horizon.

Image by **Mary Lou Whitehorne**

Members' Universe:

John McPhee's Moondance

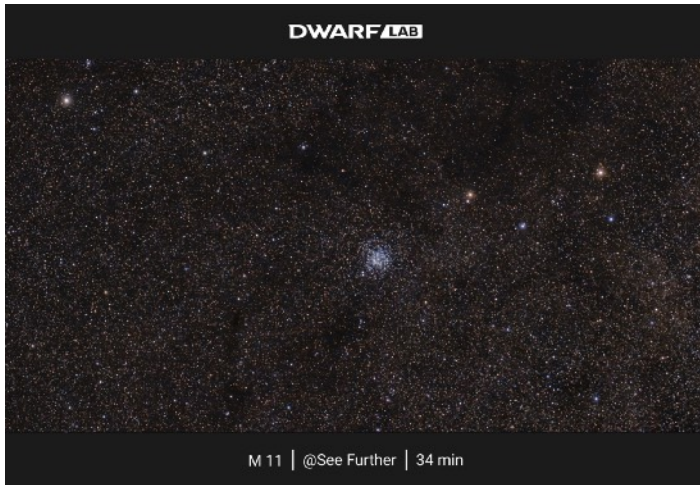


The waxing gibbous Moon rises above Glenville, Inverness County, on Sept. 24, 2026. Photo by **John McPhee**

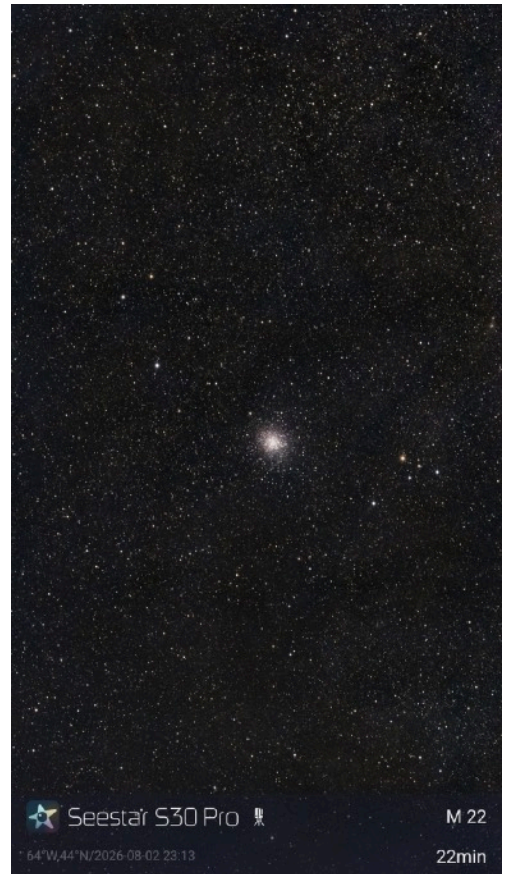


The waxing gibbous Moon adds its glow to the sunset on Oct. 20, 2026, in Portland Hills. Photo by **John. McPhee**

Members' Universe: David Hoskin's Universe



Messier 11 (Wild Duck Cluster) by **David Hoskin**
Dwarf 2; 136 x 15 sec subs at gain 80 in Alt/Az mode; post processing with Stellar Studio, Photoshop, and MS Photo.



Messier 22 (Great Sagittarius Cluster) by **David Hoskin**
Seestar S30 Pro: 44 x 30sec subs in EQ mode; post-processing with Photoshop and MS Photo.



Messier 31 (Andromeda Galaxy) by **David Hoskin**
Dwarf 2; 236 x 15 sec subs at gain 80 in Alt/Az mode; post-processing with Stellar Studio, Siril, Photoshop and MS Photo.



Partial Lunar Eclipse at 1:09 a.m. on 28 August 2026 by **David Hoskin**
Canon T3i DSLR (ISO-400, 2 sec), Celestron 102mm f/6.5 refractor, Celestron SLT mount; post-processing with Photoshop and MS Photo.



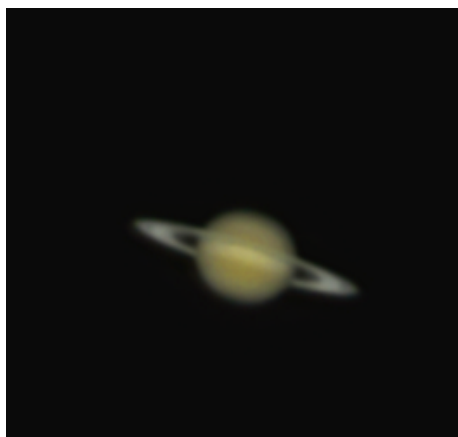
Sunspots on 21 July 2026 by **David Hoskin**
ZWO ASI533MC Pro camera, Celestron 150mm f/5 reflector with Baader solar film, SkyWatcher EQ6R mount; 200 x 15 millisecond at gain 160; stacking with AstroSurface, post-processing with Registax and Photoshop.

Members' Universe: David Hoskin's Universe



Messier 33 (Triangulum Galaxy)
by **David Hoskin**

Seestar S30 Pro: 254 x 30sec subs in EQ mode; post-processing with Siril, Photoshop and MS Photo.



Saturn at opposition on 4 October 2026
by **David Hoskin**

ZWO ASI224MC with UV/IR cut filter, Explore Scientific 2x focal extender, Orion 102mm f/13 MCT, Celestron SLT mount; 250 x 12 millisecc at gain 338; stacking with AstroSurface, post-processing with Seti Astro Suite and Photoshop.



Partial Solar Eclipse on 12 August 2026 by **David Hoskin**
Player One Apollo-Mini M camera, Lunt 40mm solar telescope, Celestron SLT mount; 400 x 0.26 millisecc at gain 200; stacking with AstroSurface, post-processing with Registax, Photoshop and MS Photo.



Wide-field Heart and Soul Nebulae and Double Cluster
by **David Hoskin**

Touptek ATR2600C camera with UV/IR cut filter, Svbony SV535 f/2.8 APO lens, Explore Scientific iEXOS-100 PMC8 mount; 28 x 240 sec at gain 100; stacking with DeepSkyStacker, post-processing with Siril, Photoshop and MS Photo.

PUZZLE CORNER – Look Up!

By Lisa Ann Fanning

Find these Autumn astronomy terms. Solution will appear in the next edition of *Nova Notes*.

A	T	H	T	O	A	D	C	A	N	D	R	O	M	E	D	A
W	E	P	N	A	S	Q	U	X	N	L	Y	B	G	Z	B	N
S	M	L	V	F	U	X	O	N	I	U	Q	E	T	G	O	X
L	O	S	Y	M	S	L	S	J	V	K	S	C	P	I	F	W
P	C	S	Z	E	A	O	V	U	F	T	F	Z	T	F	R	N
G	K	V	Q	T	G	G	S	D	E	C	D	A	N	B	R	S
R	A	I	S	E	E	I	S	L	K	D	L	L	J	U	R	A
E	J	L	Y	O	P	O	E	R	G	L	I	E	T	D	U	T
T	Z	D	A	R	W	S	Z	P	E	H	K	A	R	T	E	X
I	S	D	M	X	C	F	O	T	B	B	S	U	U	N	M	A
P	F	Z	H	O	Y	V	S	A	H	Z	X	M	B	R	O	X
U	O	C	P	L	A	N	Z	M	P	G	N	B	C	I	O	R
J	R	E	G	Y	O	N	O	M	T	S	E	V	R	A	H	
O	I	J	G	C	C	S	T	A	R	G	A	Z	I	N	G	D
R	O	Q	U	F	W	R	R	H	I	D	N	F	A	O	Y	K
V	N	N	N	E	B	U	L	A	F	T	W	Z	N	C	W	U
X	H	R	J	N	N	J	Y	R	T	R	B	J	D	A	U	E

WORD BANK

AUTUMN
HARVESTMOON
EQUINOX
ORION
PEGASUS
ANDROMEDA
GALAXY
NEBULA
TELESCOPE
SATURN
JUPITER
METEOR
COMET
CONSTELLATION
STARGAZING

Answers to Last Edition's Puzzle

A	S	T	E	R	I	S	M			
S	C	O	R	P	I	U	S			
A	P	H	E	L	I	O	N			
A	Q	U	I	L	A					
A	N	T	A	R	E	S				
S	A	G	I	T	T	A	R	I	U	S
H	E	R	C	U	L	E	S			
Z	E	N	I	T	H					

Bonus Word: TRIANGLE

September 12, 2026 RASC Halifax Centre Meeting:

(26 attendees)

To watch a replay of the meeting, please visit: <https://www.youtube.com/watch?v=NqTfO5uND28> on the RASC Halifax YouTube Channel.

Welcome - David Hoskin

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

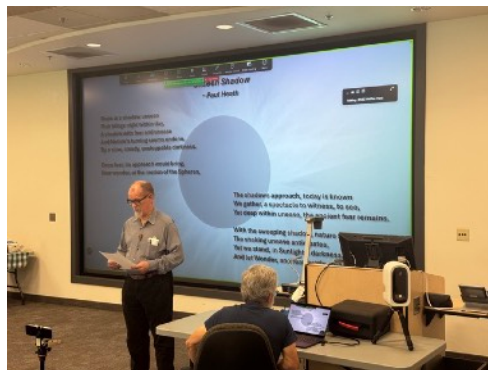
David Hoskin - Photo Montage

David presented photographs and/or drawings from Centre members Jerry Black, Judy Black, Michael Boschat, Barry Burgess, Jason Dain, Jeff Donaldson, Tim Doucette, Lisa Ann Fanning, Paul Gray, Andy Hasler, David Hoskin, Frank Logan, Blair MacDonald, Tom MacIntyre, David McMullin, John McPhee, and Bob Russell.

Paul Heath - Food for the Soul - Unseen Shadow

Paul presented his latest poem, Unseen Shadow, which can be read on page 14 of this edition of Nova Notes.

(Photo credit: Dave Chapman)



Member Presentations:



Judy Black - Family camping trip

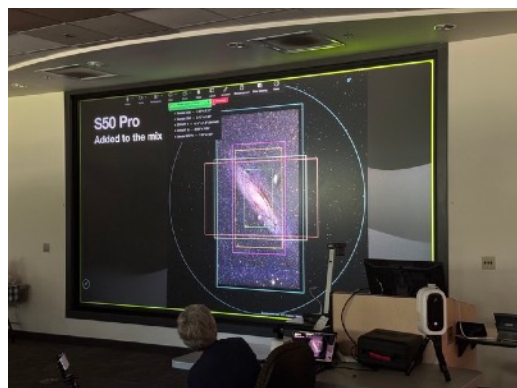
Judy, who is Secretary of RASC Halifax Centre, presented the tale of an eclipse, beached telescope and a wedding (along with photos) as the highlights of a family camping gathering in late August at Thomas Raddall Provincial Park.

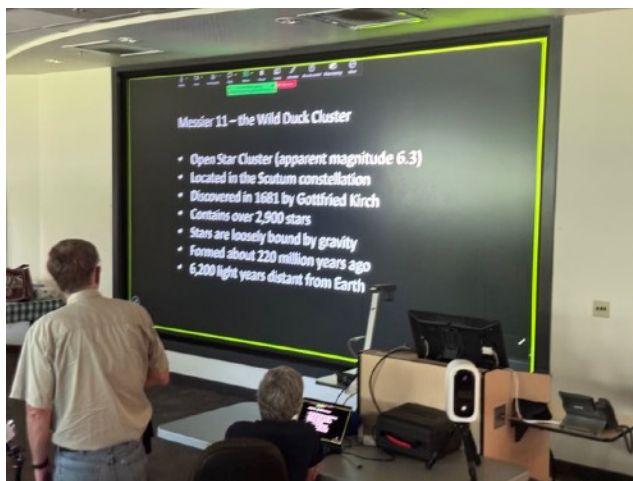
(Photo credit: Dave Chapman)

Jerry Black - Summer photos and video

Judy's husband Jerry followed her presentation with one of his own showing images and video he took during the summer including time-lapses of the partial solar eclipse and the Kejimikujik Dark Sky Weekend.

(Photo credit: Dave Chapman)





David Hoskin - Summer star clusters

David showed photos and provided information about some of the globular and open star clusters that are available for viewing in the summer night sky.

(Photo credit: Dave Chapman)

Dave Chapman - Observers Handbook

Dave talked about the RASC's Observer's Handbook, which is a benefit of membership that offers a wealth of information about astronomical concepts, celestial events and other data. Dave is a former editor of the handbook, which is one of the oldest continually published scientific publications in Canada.

Jerry Black - Using the PiFinder

Jerry explained how to use the PiFinder, a device and app that can identify the part of the sky that your telescope is pointing at.

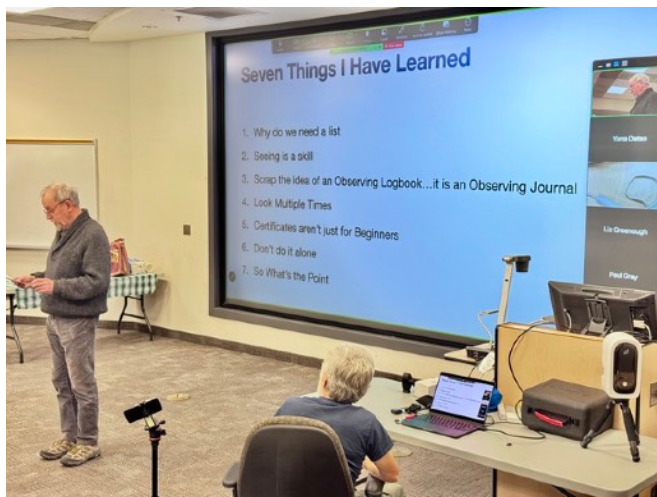
Tiffany Fields - Solar eclipse event

Tiffany, an astronomical technician and manager of the Burke Gaffney Observatory at Saint Mary's University, spoke about the public observing event she organized for the partial solar eclipse on Aug. 12 at BGO.

Tony McGrath - Seven Things I Have Learned

Tony McGrath, the Halifax Centre's observing chair, spoke about the learning experience that accompanied his acquisition of the RASC's observing certificates.

(Photo credit: Dave Chapman)



David Hoskin (EPO/Observing Chair) - What's up in the September Sky

David reviewed highlights of the September sky. He highlighted the Sun, solar activity and the Moon. He also highlighted planetary positions, constellations, stars, meteor showers, deep sky objects and other astronomical phenomena visible this month.

Each month, you can find David's presentations on the homepage at <http://halifax.rasc.ca>.

October 3, 2026 RASC Halifax Centre Meeting:

(31 attendees)

To watch a replay of the meeting, please visit: <https://www.youtube.com/watch?v=nVCPIQLMhGY> 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 from Centre members Jerry Black, David Chapman, Jeff Donaldson, Paul Gray, Andy Hasler, Frank Logan, Tom MacIntyre, Mark Mander, David McMullin, John McPhee, Fabian Pittman, Bob Russell, Daren Talbot and Mary Lou Whitehorne.

Judy Black, Secretary of RASC Halifax Centre introduced the day's guest speaker and RASC Halifax Member of 23 years, Matt Paine.

Special Guest - Matt Paine: *Radio Astronomy for Beginners - Meteor Scatter and Skip*

Matt Paine presented an introduction into the radio astronomy world of meteor showers, meteor scatter, and meteor skip. He focused on the use of Software Defined Radios (SDR), which is an up and coming technology. SDR has completely changed how radio astronomy can be done in a simple, straightforward way, with minimal cost, and real time results.

News from the Board presented by Tony McGrath, President of RASC Halifax Centre

1. Observers calendars are available to order - Created by RASC members, these Calendars have won a number of awards for graphical quality and design features. It features images taken by amateur astronomers as well as astronomical data such as daily Moon rise and set times, significant lunar and planetary conjunctions, eclipses, and meteor showers making it a valuable reference for the every amateur. Cost is \$25.00 if you pick them up at the meeting, \$30.00 if you would like them mailed.

2. RASC General Assembly 2027 - The next RASC General Assembly is coming to Kingston, Ontario in May 2027. The GA brings together amateur astronomers and astrophotographers of all skill levels for a weekend of:

- World-Class Speakers: Presentations on the latest space science discoveries.
- Practical Workshops: Sessions covering everything from beginner stargazing to deep-sky imaging.
- Networking with members from across the country.
- Whether you plan to make the trip to Kingston or join via virtual/hybrid options from home, keep an eye on the RASC website <https://rasc.ca/general-assembly> for registration updates as the event approaches.

3. RASC Halifax Centre AGM is being held 5 December 2026. We are actively seeking new talent for executive positions. We need a President, a Secretary & 1 Director. If you are interested or would like to learn more, please contact either Peter Hurley, Pat Kelly, Judy Black or Tony McGrath.

David Hoskin (EPO/Observing Chair) - What's up in the May Sky

David reviewed highlights of the October sky. "Nights are getting long!" 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), meteor showers and deep sky objects.

Each month, you can find David's presentations on the homepage at <http://halifax.rasc.ca>.