

Nova Notes

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

PO Box 31011, Halifax, Nova Scotia, Canada B3K 5T9 www.halifax.rasc.ca halifax@rasc.ca



The Great North American Eclipse

MAR / APR 2024

VOL 55 NO 2

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PLUS ALL YOUR FAVOURITE REGULAR FEATURES!

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Cover:

Main Photo:

"The scene at totality at Storeytown NB. This is a composite of a foreground taken with a widefield camera and the eclipsed Sun taken with a long lens."

In this image, you can see Jupiter top left and Venus bottom right."
April 8, 2024 by **Jason Dain**

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

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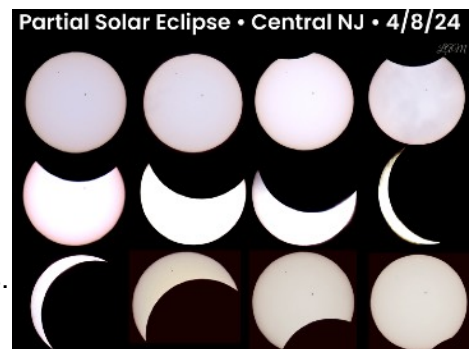
From the Editor

There have been some exciting things to look at in the sky this edition period. Comet 12P/Pons–Brooks has brightened, Betelgeuse has been behaving differently, leading to speculation about whether it will go supernova in our lifetimes and, of course, the "Great American Eclipse" is being touted as "North America's most viewed celestial event ever."

Once again, personal obligations kept me close to home and unable to see the big show, but we did have a nice day with 90% eclipse here in the Garden State.

Rob and I settled for a quiet afternoon at home, in our yard with our commemorative Moon Pies and a cup of tea. I set up the Dwarf 2 and also put a solar filter on my Canon Powershot SX70 HS to help record the occasion.

We did not get total darkness, as our friends in the path of totality did, but at peak, it did get cooler, and we did experience change in behaviour in our birds coming to the feeders that were just feet away from us. Just prior to maximum, the birds got extremely vocal and our Mourning Doves rushed the feeders in an aggressive manner (and a larger than usual flock.) At maximum, the birds were quiet and away from the feeders. As we moved away from maximum once again, the birds returned to what I consider "normal behaviour," coming to the feeder in an orderly fashion.



My mind was with so many friends, in different places across the continent. Wondering what everyone was experiencing in Doaktown, P.E.I., and Texas.

Another friend texted me from Texas with a photo right at totality with the words "thinking of you."

It is moments like this that make me wish we could have this kind of unity all day, every day. For those fleeting hours, we were all looking at the same thing, thinking of each other, and that's a good thing.

With continued gratitude,

Lisa

Upcoming Meeting Dates

- **May 4, 2024 Members' eclipse stories**
- **June 1, 2024 Tiffany Fields** (BGO Astronomy Technician)
- **September 7, 2024 - BBQ in lieu of meeting**
- **October 5, 2024 – Luigi Gallo** (JAXA's XRISM satellite)
- **November 2, 2024 TBD**
- **December 2 (Members Meeting + AGM)**

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 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, John Liddard, 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, 2024

Elected

President	Tony McGrath
Vice-President	Judy Black
Secretary	Peter Hurley
Treasurer	Gregg Dill
Director	Matthew Dyer
Director	David Hoskin
Director	John Nangreaves
Director	Dave Robertson
Director	Jaime Whynot

Appointed

Honorary President	Mary Lou Whitehorne
Auditor	TBD
Communications Committee, Chair	Judy Black
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
Librarian	Jerry 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	John Liddard
Webmaster	Jerry Black

SAVE THE DATES FOR 2024!



Dark-Sky Weekend
August 2-4, 2024

New Moon August 4, 2024

Nova East Star Party
August 9-11, 2024



Updated 2024 location to be announced

A Message from the President

Hello Halifax RASCals

I would like to take this opportunity to update you on one aspect of the ongoing work of the board of directors.

Based on your input we have established a set of goals and objectives for RASC Halifax, and I shared those with you in the February issue of Nova Notes. We have now turned our attention to the development of a plan that will start us on the path to achieving these goals. The first draft of that plan has been prepared, and was presented to the Halifax Board at our April meeting. We are excited about the possibilities this plan holds for the future, as it will guide our activities and initiatives for the coming years.

The ideas, feedback, and contributions you provided through the recent survey shaped this plan. As we work toward finalizing and approving the plan, we recognize that its successful implementation will require the involvement and support of our members. The time it shall take to implement the elements of the plan will depend very much on how our membership engages and participates in plan execution.

In the coming weeks, we shall have the plan ready for distribution to the entire membership. Once you have received a copy, I would ask that each of you take some time to review it and do a couple of things;

1. Provide feedback to me on the plan. I am interested in what you think.
2. Give some consideration to getting involved, in whatever way you can, in the implementation of this plan. If you are interested in participating in any aspect of the plan, let me, or any board member, know. We would be delighted to have your help.

I understand that everyone has busy schedules and competing priorities. I hope that you will consider RASC Halifax and look for ways in which you can contribute to its success. Your involvement will not only benefit RASC Halifax, but also enhance your own experience as a member. Whether it's volunteering in some capacity, sharing your expertise, or simply attending events, there are many ways you can get involved and make a difference.

I believe if we can implement the things we are planning, Halifax RASC will become a more vibrant and focused Centre that's responsive to the needs of its membership. I encourage you to stay engaged, share your ideas and be part of this exciting journey.

Best Regards
Tony McGrath
President RASC Halifax

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

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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 Halifax Centre.

Articles on any aspect of astronomy and related activities will be considered for publication.

Remembering Dave Lane

By John McPhee

Friends and colleagues are mourning the loss of Dave Lane, a life member and dedicated volunteer with the Royal Astronomical Society of Canada.

Dave died from brain cancer on March 24, 2024. He was 60 years old.

He was director of the Burke-Gaffney Observatory at St. Mary's University, and systems administrator for the university's Department of Astronomy and Physics. He retired in 2022 after 29 years at SMU.

Dave was a member of the Halifax RASC for 38 years. His roles included centre president and he also was national society president. He lived in Stillwater Lake, Halifax County, with his wife Michelle.

From his obituary: "David Lane was a remarkable man. A renowned astronomer, he was also an incredibly kind, caring and generous man who brought energy, enthusiasm and expertise to everything he did. He was the guy ever ready to pitch in and help, regardless of what needed to be done; he was also deeply committed to making things better. Dave had a great sense of humour and a keen intellect."

We will honour Dave's memory in a future special edition of Nova Notes.



A typical candid shot of Dave, communicating with the ISS as it passed over Nova East some years back. Photographer unknown.

Halifax Centre Makes Feminist RASC History

By Mary Lou Whitehorne, FRASC
Past President RASC

There were nine of us. Seven women. Two men.

Did you catch that? The RASC is an overwhelmingly male-dominated organization. This time, the men were seriously outnumbered. This is a first! This is a historical event in the history of the RASC and the Halifax Centre!

A small group of Halifax Centre members, with friends and family, planned and executed the first ever female dominated RASC eclipse expedition. They collaborated by email and phone, doing the research and planning, logistics and organizing, and conducted a successful eclipse trip to Cape Wolfe, P.E.I.

The chosen observing site was somewhat off the beaten path. It avoided all public eclipse events being organized for P.E.I. The requirements were space, quiet, an expansive view over the water to the south and west with no obstructions, close proximity to the shoreline of the Northumberland Strait, and shelter from potentially cold northerly winds. Oh yes: It had to be well within the path of totality.

We found our location at Cape Wolfe, on a small country road named Oceanview Drive, according to Google Maps. With no street sign in place, and after extensively scouting the location, the dirt track was dubbed "Muddy Lane." No matter. It was perfect, with lots of open grassy area to park, picnic, and experience what turned out to be a spectacular eclipse under perfect conditions.

As the eclipse proceeded, and the Sun was increasingly obscured by the Moon, we watched for the approach of the Moon's shadow from the southwest. We were positioned with some elevation, and a wide view of the Strait. The Moon's shadow would take about 20 seconds to sweep from New Brunswick, across the water, and envelop our nine observers in the darkness of totality.

It was magnificent! The shadow approached and engulfed us. The surrounding horizon was painted with intense sunset colours. The great glowing jewel of the eclipsed Sun shone brilliantly in a deep blue sky. Great feathers of corona stretched out from the Sun. Glowing red prominences revealed themselves. Venus and Jupiter appeared. We were awestruck for almost three minutes. And then it was over. But what a show it had been!

Who were the nine? The ladies: Michelle Lane, Louise Whitehorne, Mary Lou Whitehorne, Bev Williams, Olivia Williams, Gertrude Bishop, and Katrina Bishop. The men: Roy Bishop and Kent Williams. For Star Trek fans, the ladies were Seven of Nine.

Live long and prosper 🙌



Waiting for totality are Mary Lou Whitehorne, Michelle Lane, and Roy Bishop.
Photo by Louise Whitehorne.



Bright sunset colour along the horizon under the totally eclipsed Sun, as seen from Cape Wolfe, P.E.I..
Photo by Mary Lou Whitehorne

Musings From the Eclipse in Doaktown

By Dave XVII Chapman, FRASC

I wet my pants during the solar eclipse—but it's not what you think!

I had set up my camp chair with my water bottle in the cup holder. When I stopped fussing with my telescope, I decided to sit down for a rest, not realizing that my bottle had toppled over and created a pool of water in the seat. Needless to say, I wet my derrière thoroughly when I sat down! My chair eventually dried out in the Sun but I observed the eclipse in wet jeans. Luckily, all eyes were on the Sun.

All joking aside, our group of about 30 in Doaktown, N.B. with Cliff Valley Astronomy had a marvellous experience. The eclipse was cloud-free and spectacular: the dimming, the appearance of Venus and Jupiter, Bailey's Beads, the Diamond Rings*, the several prominences, the amazing corona, the birds going crazy, the crowd going crazy. People were crying, truly awestruck.

I found the sky was remarkably transparent and dark compared to August 2017. I see widefield photos with blue sky, but my impression was much darker, as was my crude iPhone snapshot.

I have seen 4 TSE: N.B. (1972), Curaçao (1998), Nebraska (2017), and N.B. (2024). I barely remember 1972. Friends ask me which is my favourite, and I answer that it is like choosing favorite kids: they are all special, but different.

* Organizer Stephane Picard proposed to his girlfriend at 3rd contact—for real, with a real diamond ring!



Photos courtesy of Dave Chapman
Above - Dave and wife, Christine along with "Garcia" enjoying the day.
Top right - Reunited: Dave, John Read and Tim Doucette also saw the 2017 eclipse in Nebraska together.

Seestar's Performance During Eclipse

Thoughts and Photos by John Read

The Seestar is a great tool for solar observation in general, but for the total solar eclipse, it really shone. It doesn't produce stunning desktop screensaver quality images, but for social media, and outreach purposes, it couldn't be easier. The Seestar can find the Sun and keep it centred without intervention, without having to worry about losing tracking. It just works.

One of the only weaknesses in using a Seestar to take a time-lapse of the eclipse is the centring function itself. When the Sun is about halfway covered, the centring function centres the illuminated portion (effectively ignoring the actual position of the Sun), which looks awkward in the time-lapse. Then, when totality occurs, you pop off the filter, and the centring function immediately recognizes that the image is no longer centred and fixes the image in a single frame. I was able to capture Baily's Beads and a bit of the Diamond Ring by leaving the solar filter off for about 10 seconds past totality.

My regret is stopping the time-lapse before the end of the eclipse, but I was worried that something would go wrong, so I stopped the time-lapse to check that the file was saved. For individual photos, the Seestar downloads them automatically to your phone's album. However, for videos and time-lapse, these sit on the Seestar's internal hard drive until you download them manually. After downloading the file to my phone to confirm that I had a backup (should something happen to the file on the Seestar), enough time had passed that there would have been a significant gap in the eclipse. So, I left the Seestar alone at that point and spent the remainder of the eclipse chatting with others about the experience.

If I were to use the Seestar again, I would also test "raw" mode during time-lapse. I didn't test this during this eclipse because I was worried shooting a "raw" time-lapse would fill up the Seestar's memory before totality. In any case, I thought these stills from the time-lapse turned out pretty good.



Seestar (continued)

Photos by John Read



Dain in Doaktown

Story and Photos by Jason Dain

A year or so ago, I learned that we would have a total solar eclipse in the Maritime provinces. I immediately decided that I would travel to central New Brunswick to observe and photograph the event. My first inclination was to travel to the area and be free to go wherever the clouds weren't to maximize my chances of seeing the event. As it turned out, I was asked by Stephane Picard, owner of Cliff Valley Astronomy, to do some presentations at his Sky Experience 2024 event and help other participants to view and photograph the eclipse in Doaktown, N.B.

On Saturday, April 6, I packed up all my gear and travelled to Miramichi for the Astronomy East trade show. They had gotten over 30 centimetres of snow the day before and some power outages, so things were a bit hectic on the drive and for the show. I gave my presentation and watched some of the other presenters before calling it a day. The next morning, the conference wrapped up and we headed to Doaktown. The forecast was looking promising, but the skies were still overcast.

As we arrived in Doaktown and got settled into our cottages, the skies started to clear. After a few afternoon events, we decided to set up our photography equipment for Monday's eclipse. I was planning on using tracking mounts to follow the sun across the sky and make aligning my images easier for post-processing. While this can be done during the day, it is much better to do it at night using the North Celestial Pole (NCP) near Polaris.

After dinner, we planned a night of astrophotography to take advantage of the clear skies. I for one was too excited to sleep so I figured I'd make the most of it. I started one of my rigs imaging the Orion constellation and went to see how others were making out. I looked to the east and noticed a bright area moving across the sky that didn't quite look or move like a cloud. This object moved right through the area I was imaging and it turned out it was a Falcon 9 rocket that had launched earlier that night with a payload of Starlink satellites.

After a few great hours under the stars, I decided to try and get some rest until about 3:30 a.m. when the Milky Way rose. When my alarm went, I went down to the riverbank and set my camera up to capture the Milky Way. A large splash, likely from a big salmon, scared me wide awake and I kept imaging until sunrise.

We had a few events planned that morning but the whole group was buzzing about the weather and how lucky we were to be in clear skies for the upcoming eclipse. After the morning program, we went and got the rest of the gear set up in advance of the start of the eclipse.

I had three different cameras set up: Two long telephoto lenses to capture detailed images of the eclipse and one wide angle setup for the landscape changes over time during the eclipse. After tweaking cameras and settings, we were all ready to go.

The group gathered in the field along the river a short time before the eclipse started. There were some high clouds passing through but nothing that would impact our ability to experience the eclipse in all its glory. You could hear and feel the excitement as the first bit of the sun was covered by the Moon.

Over the next 45 minutes or so, the buzz grew in intensity as totality approached. Most of my camera gear just needed periodic checks as I had automated things as best I could. I spent the first while just watching the Sun get more and more blocked by the Moon. Over the time it took for the Moon to approach complete coverage, I observed several eclipse-related phenomena like shadow bands, light intensity changes and changes in the temperature/ wind and bird behaviour.

As totality approached, the light got lower and even eerie looking until it was like someone turned off the lights. I had a plan for totality to allow me to take a series of rapid shots to cover the Bailey's Beads, Diamond Ring and the corona during totality. I had less than four minutes of darkness to try and do all that.

I didn't expect totality to affect me the way it did. When it got dark, it was like my brain short-circuited for nearly a minute. I stood in awe looking around in all directions noting the 360-degree sunset effect from the Moon's shadow. Once I was able to function again, I quickly captured the images I had planned as well as the images I wanted to capture as the Moon was drifting out of total coverage. I had planned to stay for the rest of the eclipse, but I had a long drive and wanted to try and avoid some of the traffic on the way back to Halifax.

I had photographed a partial eclipse in Halifax in 2021 but I was totally unprepared for how amazing the total eclipse would be. A lot of experienced folks had told me to just experience my first eclipse without trying to photograph it. As a keen photographer, I couldn't pass up the opportunity to at least try and get some shots. I was able to capture my target image which was a blended image of the corona showing earthshine during totality.

I also captured some pretty cool images of prominences that were visible right at totality. More importantly, I was able to experience the transition to totality and some of totality without worrying about my cameras and that was beyond description. I have certainly caught the eclipse chasing bug and will be trying for the next one in 2026.



"When I set out to photograph the eclipse, I had a particular image in mind. The image I wanted to create was one showing the corona detail exposed by the moon covering the sun as well as the earthshine on the moons surface while it was covering the sun. A shot like this requires much more dynamic range than any camera can catch in a single shot.

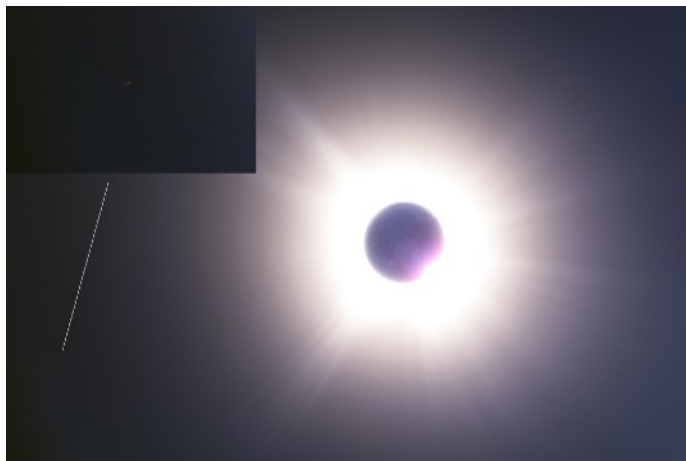
To create this image, I captured a number of shots with exposures ranging from 1/5000th of a second for the prominences to 4s to show the earth shine on the moon. I blended the images in Adobe Photoshop to bring out the dynamic range and the applied various adjustments to get to the final version.

This was my first total eclipse and I'm more than happy with the result. The whole experience was wonderful and I can't wait to see the next one in 2026."

Doaktown, NB - April 8, 2024.

While we didn't get to see Comet 12/P Pons-Brooks, an unexpected comet made an appearance during the eclipse. Earlier in the day, Comet SOHO-5008 was discovered by an amateur astronomer in Thailand. Comets like this are only possible during eclipses and are not visible to the naked eye.

Sungrazers are comets that pass extremely close to our host star at perihelion, within about five million miles (eight million kilometres) of the Sun, or around 10 times closer to the Sun than Mercury. Most belong to the Kreutz group, considered fragmented from a considerable comet that exploded around 2,000 years ago.



This is a single three-second exposure taken during totality with a Nikon Z8 and 180-600mm lens at f/8, ISO64.

Doaktown N.B. - April 8, 2024.



A prominence, sometimes referred to as a filament, is a large plasma and magnetic field structure extending outward from the Sun's surface, often in a loop shape. Prominences are anchored to the Sun's surface in the photosphere, and extend outwards into the solar corona. In this case, the large prominence on the lower side of the images is approximately 85,000 kilometres long or almost seven earth diameters! These structures, usually only seen through specialized H-alpha telescopes, are visible to the naked eye or normal cameras during the total eclipse.

This image was captured with a Nikon Z8 with 180-600mm lens @ 400mm shooting at 1/2000 of a second, f/8, ISO 64.

Doaktown N.B. - April 8, 2024.

A close up of the transition time between Bailey's Beads and the Diamond Ring showing some pretty crazy prominences. This is a single image taken with a Nikon Z8 and 180-600mm lens @ 400mm. Exposure details were 1/2000 of a second, f/8, ISO64.

Doaktown, N.B. - April 8, 2024.



Totality in Miramichi

Story and Photos by Tiffany Fields

I ended up on the rooftop of a Pharmasave building in the middle of Miramichi, N.B., for the total solar eclipse on April 8 and I couldn't believe how perfect the weather was.

There was a group of about a dozen kids (aged from about seven to 12) and about a dozen adults, mostly employees and their families from the professional building we were on top of. My partner's cousin is a doctor who has a clinic in the building, and that was our "in."

It was a perfect day. We had a telescope with a solar filter, eclipse glasses, pinhole viewers, and importantly – a mini BBQ for making hot dogs on the rooftop, of course!

We enjoyed and observed so many things during the partial phases. We employed our hands as pinhole cameras, watched the moon in the telescope cover up big sunspots, and felt the temperature and wind change around us as the colours of our surroundings got a bit more drab than a typical sunny afternoon.

Totality was incredible – beyond anything I imagined. This was my second total solar eclipse, though back in 2017 the sun ended up behind a big cloud during totality in the middle of Missouri.

The effect of totality in 2017 was still incredible even if I couldn't see the corona well, but the total solar eclipse of April 8 was beyond words. It was incredible. It was shocking. It was beautiful. Seeing Venus pop out in the sky in the moments before totality, the shadow bands in patches of snow on the roof, the large bright pink prominence at the 7 o'clock position on the sun, and the kids all around me excitedly looking for other stars in the sky, the all-horizon sunset, the instant darkness followed by instant light as totality ended – wow. I'll stand by the fact there are no videos or photos that will capture the sight and feeling of the experience of totality.

It was perfect. It was beyond anything that could have been expected.

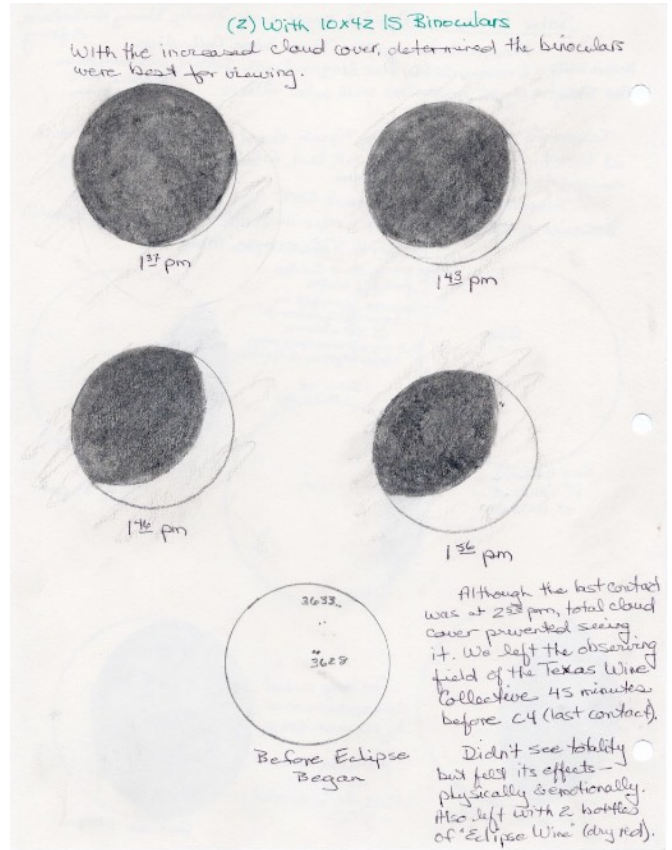
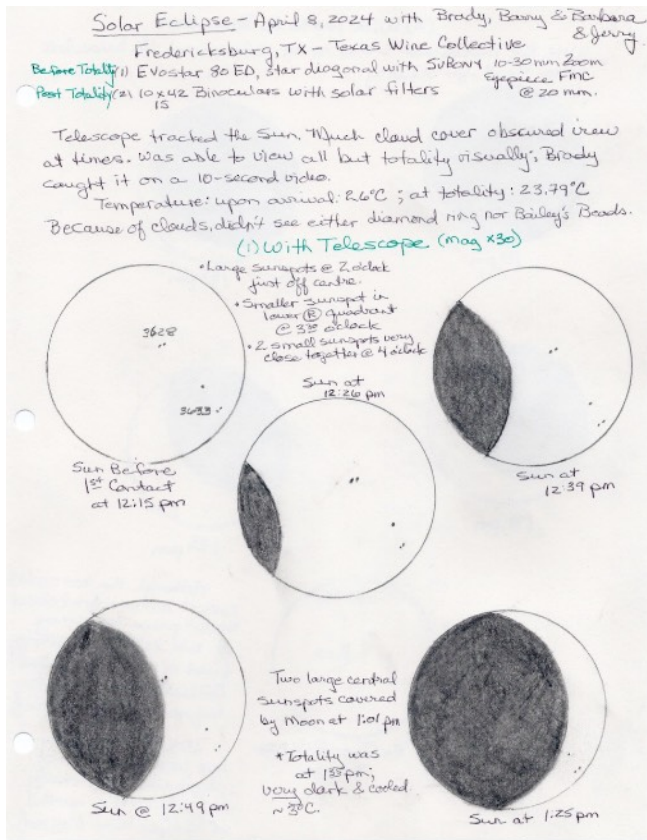
Back in Halifax, I had organized the solar eclipse viewing event at Saint Mary's University (and then fled, leaving a variety of volunteers to run it on April 8!) and I was shocked at how many people showed up – estimates of 2,500 to 3,000! The perfect weather day combined with April 8 being the last day of classes provided the perfect scenario for the whole community to come together.

It was perfect. Couldn't have asked for anything more.



Members Commemorate the Eclipse

Judy Black's Eclipse Sketches



David Hoskin's Eclipse Photos



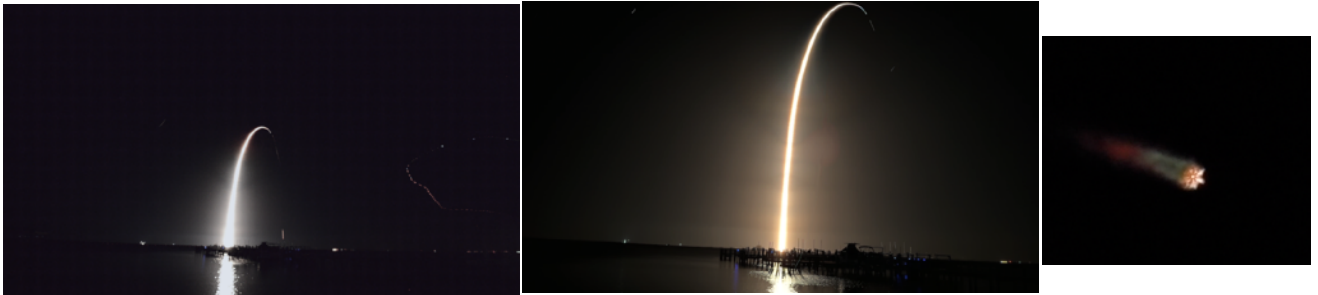
Launching Into Space

Capturing the Falcon Starlink 6-49 Launch

Story and Photos by Jerry Black

On April 12, 2024, there was apprehension in the air as we drove the 1.5 hours to the Space View Park in Titusville, Fla., to view the launch. As we set out, the GPS indicated we had 12 minutes to spare in our arrival time before launch. We arrived near the expected time and rushed to the shore to set up. With minutes to spare, we learned there was a pause in the launch countdown, giving us an extra 15 minutes to get our four cameras set up.

This wide angle shot is from a Nikon D600 with a 14mm lens taking single images every two seconds, which were subsampled every 11 frames and then stacked to create a single image. It also appears to show the trajectory and retro-burn as the booster returns to land on the drone ship *A Shortfall of Gravitas*.



Left: This is from an iPhone 15 Pro Max video (unfortunately only recorded at 1080p) and similarity subsampled and stacked. Luckily the trajectory remained visible.

Right: Using a Nikon P900 camera (2000mm equivalent) on a tripod to manually track the booster and record a video. In this cropped frame about two minutes after launch, I believe you can see individual Merlin rocket engines exhaust.

Food for the Soul: The Poetry of Paul Heath

Snow Moon

By Paul Heath

Deep Winter's midnight Moon

So high, no shadows fall

Upon the crystalline carpets

Wind carved waves.

Silence is locked within

The frigid stillness

Of deep Winter's crystalline air.

Breaths shadow fractures,

As glittering ice crystals, to gently

Upon the white crystalline carpet fall.

Moon light doth rise and fall,

In shadowless sharpness

The forest stands motionless and tall.

Above day-coloured branches

The Stars, unapologetic shine

Through a summers, sky blue afternoon.

Pristine and crystalline white,

Deep Winter's glowing carpet

So sharp, so clear

Lifts up its light into the night,

Mirrored high upon the sky

A Snow-covered glowing orb replies,

It's darkened forests, a smile

Looks down,

Through deep Winter's crystalline skies.



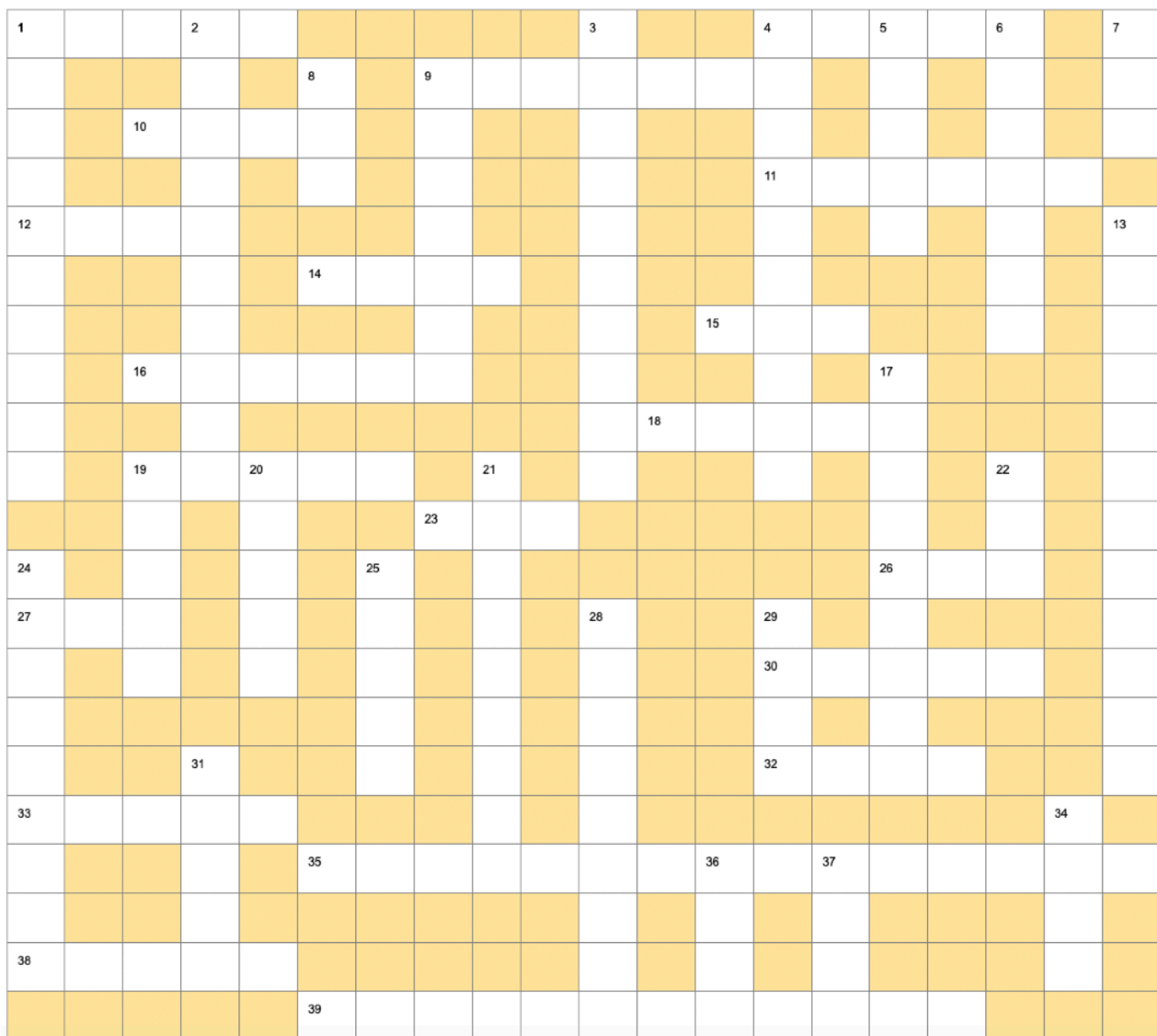
PUZZLE CORNER – Oldies but Goodies

(See next page for clues)

Astro Cross Words

By Judy Black

Astro Cross Words is a regular feature in *Nova Notes*. This edition's *Oldies but Goodies* puzzle contains really old and really spectacular DSOs and stars, misspelling due to puns (one of my favourite forms of humour) and other astronomy humour. Answers may be one or two words. Hint: If there is a question mark in the clue, it means you are answering a joke. Answers will be in the next edition of *Nova Notes*. Have fun!



Member News

EarthSky News Features Hoskin Sun Photo in Article

Once again, *EarthSkyNews* has featured **David Hoskin's** photo of the Sun in their daily email newsletter (April 20, 2024 edition.)

The link in the newsletter take you to the following article:

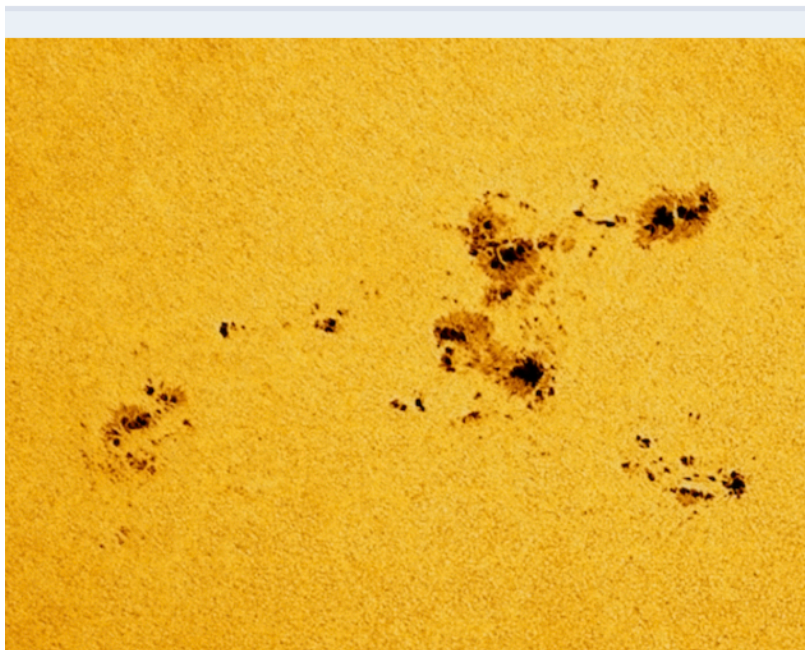
https://earthsky.org/sun/sun-news-activity-solar-flare-cme-aurora-updates/?mc_cid=9f34740f9c&mc_eid=ac7fccb72c

David is a frequent contributor to EarthSky and their Community Photos section. His EarthSky portfolio can be found here:

https://earthsky.org/earthsky-community-photos/?filter_1_3=David&filter_1_6=Hoskin&mode=all&mc_cid=9f34740f9c&mc_eid=ac7fccb72c



April 20
Top Stories and Videos This Week



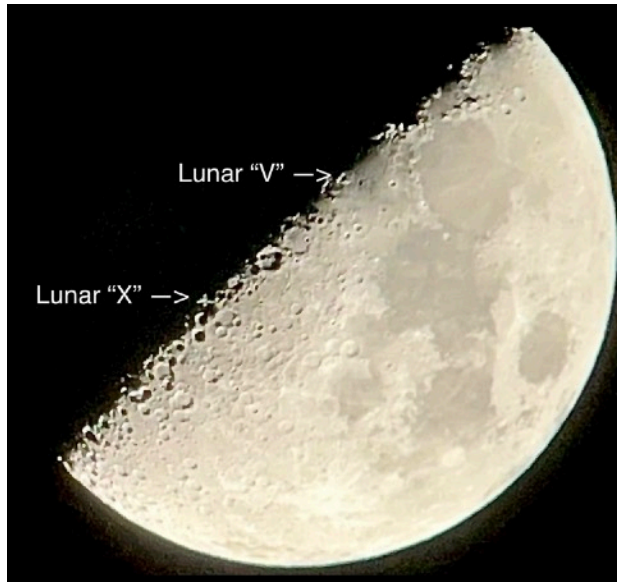
[View at EarthSky Community Photos](#). | [David Hoskin](#) caught these sunspots from Nova Scotia, Canada, yesterday. The sun appeared almost spotless a few weeks ago. Now there are 14 numbered active regions on the sun's Earth-facing side, one of the largest sunspot numbers so far in Solar Cycle 25. Thank you, David! [Read the sun news](#).

Members' Universe



On April 19, 2024, **John McPhee** captured “A big ole' waxing gibbous Moon on a cool spring evening. It's at apogee tonight, the farthest distance in this orbital cycle - about 405,500 kilometres.”

On April 15, 2024, **Lisa Ann Fanning** captured two of her favorite First Quarter Lunar features... Lunar X and V via digiscope - iPhone 13 through Swarovski Optik Spotting Scope.

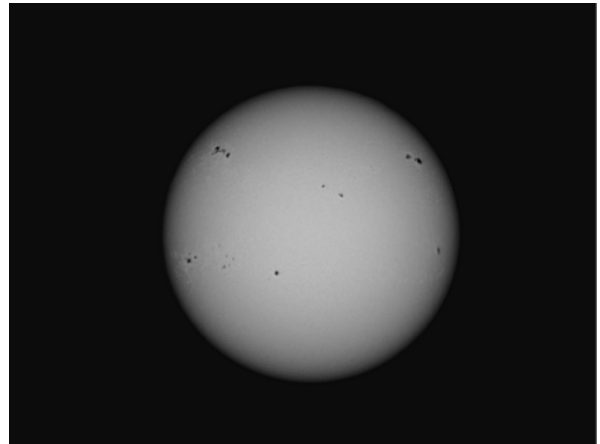


Members' Universe: David Hoskin's Universe

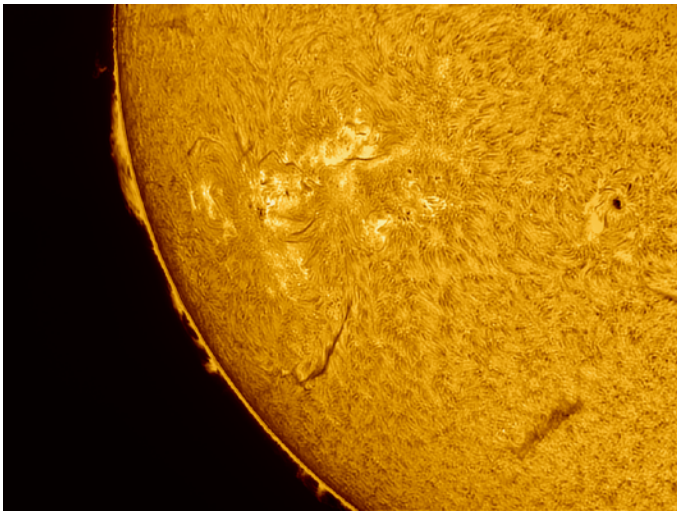
Photos and Captions by David Hoskin



Comet 12P/Pons-Brooks imaged on March 12, 2024 with the Dwarf 2.



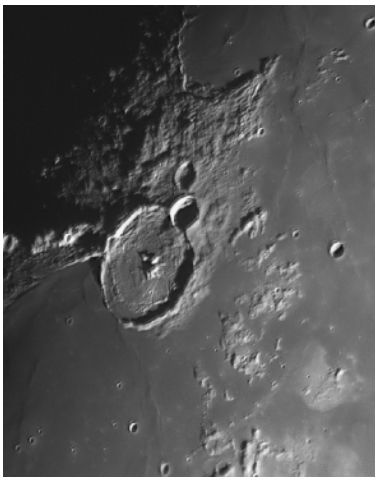
Lots of sunspot groups visible April 15, 2024



Sunspot groups (left to right) AR3643, AR3645, AR3638, AR3637, and AR3636 imaged on April 17, 2024.



First Quarter, Birds Laying Eggs Moon, April 15, 2024 imaged with the Dwarf 2



Left, Gassendi Crater
Right, Clavius Crater

March 2, 2024 RASC Halifax Centre Meeting:

(34 attendees)

Welcome - David Hoskin

RASC Halifax Director, Observing / EPO Chair and program emcee David Hoskin welcomed everyone to the monthly meeting, shared the Indigenous Land Acknowledgment, read the Centre's inclusivity and diversity statement and reviewed the agenda and made the following announcements:

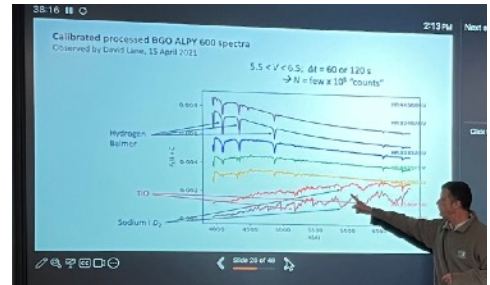
- Explore the Universe guides and Eclipse Glasses (\$2 ea., max. 10/person) available for purchase.
- The deadline for the next edition of Nova Notes is April 24, 2024 -send your eclipse photos, stories, sketches, anecdotes, etc. to novanoteseditor@halifax.rasc.ca.
- Astroimaging contest deadline is end of November - the categories are wide field, solar system, deep sky and people's choice. See the website for more information.

David Hoskin - Photo Montage

David presented photographs and sketches from Centre members Jerry Black, Michael Boschat, Dave Chapman, Lisa Ann Fanning, David Hoskin, Blair MacDonald and Vincent Vallee.

Special Presentation: Dr. Ian Short - Student Spectroscopy at the BGO

Mary Lou Whitehorne, Honorary President, Halifax Centre RASC introduced speaker Dr. Ian Short who reviewed what we can learn about various astronomical objects by looking at their spectra. He described the teaching spectrograph that is now installed on the 24" telescope at the Burke-Gaffney Observatory (BGO) at Saint Mary's University and the kinds of projects that can be done with the instrument. He showed some early data that the former BGO Director, David Lane, acquired with the instrument and showed how it compares to synthetic spectra from computational models.



Dr. Ian Short presents "Student Spectroscopy at the BGO." Photo by Judy Black

Outreach Opportunities

Discovery Centre May 18 with sidewalk astronomy on the boardwalk in the evening, weather permitting.

If anyone does any outreach, even if it is sharing a telescope with your neighbours, send details to David Hoskin at outreach@halifax.rasc.ca as those numbers do count towards outreach.

Paul Heath - Food for the Soul - Snow Moon

Paul presented his poem *Snow Moon*, which can be read on page 15 of this edition of Nova Notes.

News from the Board with President Tony McGrath

- President Tony McGrath welcomed new members to the meeting.
- Survey results are in, and the board is working on a plan for activities to engage members, including opportunities for volunteering. Expect to see more information in the coming days.
- Watch the announcements board for confirmation of the date of the next Members night.

David Hoskin (EPO/Observing Chair) - What's up for March, 2024

David reviewed highlights of the March sky and reminded us Daylight Savings Time is March 10 - so remember to adjust your programmed telescopes. Equinox is March 20 at 12:06 a.m. 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 at <http://halifax.rasc.ca>.

REMINDER: There will not be an April Meeting due to the fact many will be off "eclipse chasing."