Winnicentrics

Newsletter of the RASC Winnipeg Centre

May/June 2025

Events at a Glance

Friday, May 9, 2025: Monthly Meeting

Featured Speaker: Dr. Philip Ferguson, university of Manitoba STARLab—"Making Aerospace Technology Accessible" (see page 3)

Saturday, May 10, 2025: Science Rendezvous at the University of Manitoba
11:00 a.m. to 3:00 p.m. (see page 3)

Saturday, May 10, 2025: Members' Observing Night
Glenlea Observatory, 8:30pm start (see page 3)

Friday, Jun. 13, 2025: Monthly Meeting—Manitoba Planetarium
Featured Speaker: Ryan Wierckx, University of Manitoba—"The UManitoba Remote Telescope at Glenlea" (see page 4)

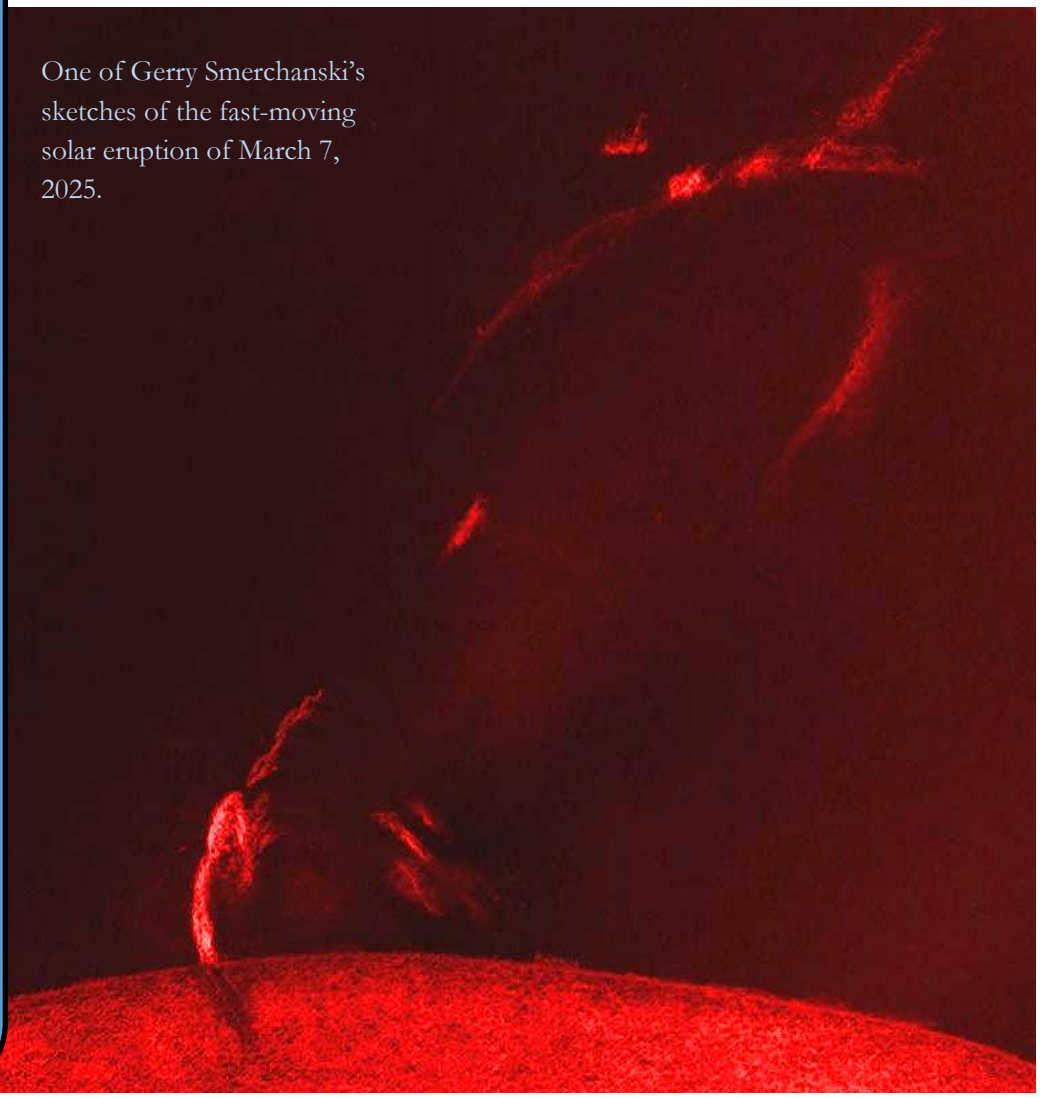
Saturday, Jun. 14, 2025: Members' Observing Night
Glenlea Observatory, 9pm start (see page 4)

Catching a Solar Eruption

by Gerry Smerchanski

A few times a year a solar eruption happens while oriented towards earth at just the right angle to be witnessed. Unless you are constantly watching the sun and/or GONG—the online Solar Observatory network showing the sun in Hydrogen alpha—you will probably miss these stunning events as they last less than a couple hours.

Around noon (CST) on March 7 there was a large low 'forest' of prominences that was low on the western limb of the sun. A little while later it was apparent that the arch that formed from the 'forest' was on its way upwards in a big way. I sent out an email to some Centre members who I knew were Solar H-alpha capable to catch this rather short lived event. It essentially was *(continued on page 5)*



One of Gerry Smerchanski's sketches of the fast-moving solar eruption of March 7, 2025.

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Forums: rascwpg.groups.io
(For details on how to use the forums and join the various subgroups, see page 13.)

Winnicentrics is published six times a year by the members of the Royal Astronomical Society of Canada—Winnipeg Centre, Incorporated. Any opinions expressed are those of the authour(s).

Submissions or comments can be sent to newsletter@winnipeg.rasc.ca.

The President's Corner

by Mark Irvine, Winnipeg Centre President

Hi everyone, this is my first opportunity to write in to you as your newly minted Winnipeg Centre President. First, I'd like to recognize my predecessor, Dennis Lyons, for all the accomplishments of his tenure as President. Our Centre has matured under Dennis' leadership to a formal Not-for-Profit Corporation (NPO) effective January 26, 2023. This took painstaking work by Dennis and the Council to build bylaws, policies, and governance that will guide & support us as an NPO and into the future. Thanks to Dennis and the Winnipeg Centre Council and membership for supporting this effort. (Big shoes to fill, Dennis!)

Now a little bit about me: I've been a member of the RASC since roughly 2001. I was first introduced to the RASC by another long-time member, Bill Krosney, who at the time was teaching an Astronomy program through Winnipeg Parks and Recreation called "Getting Into Space with Astronomy", at the Planetarium. The program was over a few weeks and culminated with a visit to the Glenlea observatory, hosted by both Bill and his long-time friend Stan Runge. As I recall there were a few graduates from Bill's course who made the transition over to the RASC.

I can't claim I was an active member for all these years. I was exposed to my first reasonably dark sky at Spruce Woods and really enjoyed those times. Like so many others I invested in my first telescope and after some reality checks regarding visual observation, with an 8" SCT vs Internet Hubble astronomy, I reset my expectations and set about completing my Messier Observing list, which I never finished. Some of the slower periods in my hobby happened when family started to get to the age that parents needed to help with their activities, so coaching football, baseball and helping with hockey pushed astronomy and my Messier list to the back seat.

With my family now grown and out of the house and my other volunteer commitments completed I answered the call to offer mentorship in astronomy so I could help others like I'd been helped over the years. I met some very nice folks through that program, but most of all got to know the Centre leadership a little better, and as a result, I asked to get more involved.

My first involvement with Council was the Finance Committee, with Abdul, then I was elected Treasurer, where my experience as a C.P.A. helped us get the financial reporting and tax returns sorted out after incorporation. My current astronomy passions are astrophotography using my C11 and Televue NP101, followed by outreach with my Lunt 50 and C5.

When the Clear sky Chart beckons, my wife is slowly getting used to the idea that I'd like to be at a telescope of some kind. The trouble is it's hard to plan for observing a month in advance, which my wife would prefer! When I want to be outside, I'd hear "but it's not on the calendar!" I'm learning to schedule things better, and my wife is tolerating some last-minute anxiety on my part to be at a telescope when the conditions are right.

I'm looking forward to this next year with the Centre. We have a great group of folks on Council and the membership is engaged and involved. We have the 50th Anniversary of the Glenlea Observatory coming up next year in 2026, our Spruce Woods Star party this year from August 22 – 24th, 2025, and there are several outreach events along the way for members to get involved with. If you're interested in getting more involved, just speak to any Council member, or send me a note at President@Winnipeg.RASC.ca.

Thanks, and Clear skies!

Mark

May Centre Events

Monthly Meeting Friday, May 10, 2025	Regular meetings are usually held on the second Friday of each month in the **Robert B. Schultz Lecture Theatre in St. John's College, 92 Dysart Road, on the University of Manitoba's Fort Garry Campus**. To find the Theatre, enter through the front door and go down the stairs to the left, then turn right and go down the hall until you reach the large open area with tables. The Schultz Theatre is on the right. Regular meetings are "hybrid" meetings, with both in-person and online participation available. Members receive a meeting invitation with the Zoom link from the "rasc-main" forum on Groups.IO. The meetings are also live-streamed and archived on the Centre's YouTube channel at RASC Winnipeg.

7:00 p.m. Beginner Session - Scott Young

7:30 p.m. Short Presentations

- Mark Irvine, Welcome & Announcements
- What's Up—Jay Anderson
- Show & Tell—Matt Hank; Stan Runge and Mike Karakas
- Social Break

8:30 p.m. Featured Speaker: Dr. Philip Ferguson, University of Manitoba STARLab—*"Making Aerospace Technology Accessible"*

After the meeting, members are invited to retire to Boston Pizza on Pembina Highway south of Bison Drive for an informal social gathering.

Saturday, May 10, 2025 (11:00 a.m.—3:00 p.m.): Science Rendezvous

The Winnipeg Centre will once again be a part of Science Rendezvous at the University of Manitoba. Join us on Saturday, May 10, from 11 a.m. to 3 p.m. at the University of Manitoba, Fort Garry campus, for Manitoba's largest hands-on science and engineering festival! This event is open to everyone, free to attend, and no sign-ups are necessary except for some shows.

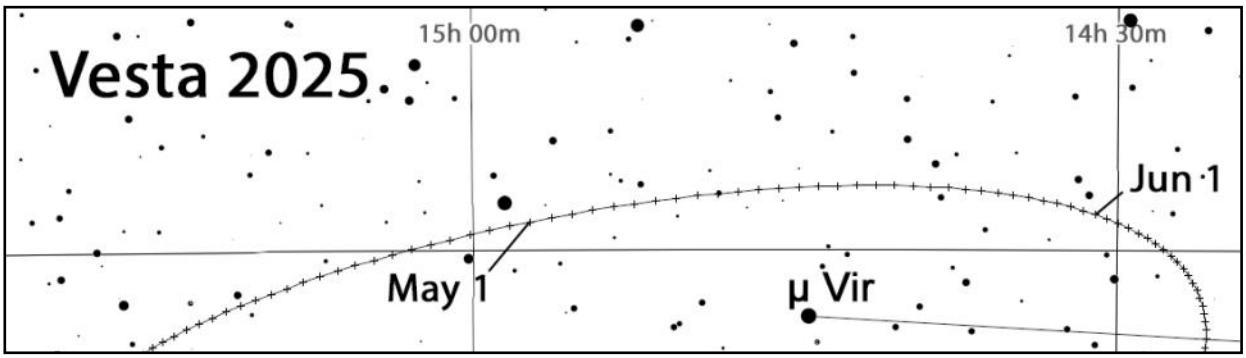
Saturday, May 10, 2025 (8:30 p.m.—11:00 p.m.): Members Observing Night

Join us starting at 8:30 p.m. for a night under the stars. The Centre's 12" LX200 telescope and 14.5" Dobsonian will be available for use. We'll also be doing tours of the facilities and some training on how to use the equipment. The event will run cloudy or clear. Hosted this month by Scott Young.

May Sky Highlights

⇒ **Jupiter** is fading into the sunset, with **Mars** not far behind. **Venus** is visible low in the morning sky. **Saturn** is nearby as well, but much fainter and harder to catch.

⇒ May is your chance to see an asteroid with your unaided eye! (From a DARK location, with very clear skies.) The **asteroid (4) Vesta** is brighter than 6th magnitude for most of the month, on the eastern edge of Virgo. You can find it using the chart on page 240 of the *2025 Observer's Handbook* (a portion of which is reproduced below).



June Centre Events

Monthly Meeting	NOTE LOCATION CHANGE!
Friday, June 13, 2025 **AT THE MANITOBA MUSEUM'S PLANETARIUM,** **190 RUPERT AVENUE AT MAIN STREET** 7:00 p.m. gAIL Wise—"Constellation of the Month: Scorpius" 7:30 p.m. Short Presentations • Mark Irvine, Welcome & Announcements • What's Up—Scott Young • Show & Tell—TBD • Social Break 8:30 p.m. Featured Speaker: Ryan Wierckx, University of Manitoba—*"The UManitoba Remote Telescope at Glenlea"* After the meeting, members are invited to retire to Boston Pizza on Pembina Highway south of Bison Drive for an informal social gathering.	Due to our regular room being unavailable, we will be meeting downtown at the Planetarium. Due to ongoing construction on Rupert Avenue, entrance is through the Main Street doors next to the Planetarium dome. Regular meetings are "hybrid" meetings, with both in-person and online participation available. Members receive a meeting invitation with the Zoom link from the "rasc-main" forum on Groups.IO. The meetings are also live-streamed and archived on the Centre's YouTube channel at RASC Winnipeg.

Saturday, June 14, 2025: Members' Observing Night at Glenlea

Start time 8:30p.m. Monthly observing night for members. Bring your own binoculars or telescope, or use the Centre's 12" LX200 in the dome. The event will run cloudy or clear. Hosted this month by Scott Young.

June 2025 Sky Highlights

⇒ Southern Manitoba is in perpetual twilight for most of June, as the Sun does not get very far below the horizon even at midnight. Short nights and long days are this month's hallmark, so make use of whatever hours of darkness you can! (Or take up solar observing—the Centre has a Coronado Personal Solar Telescope in its lending library that members can use.)

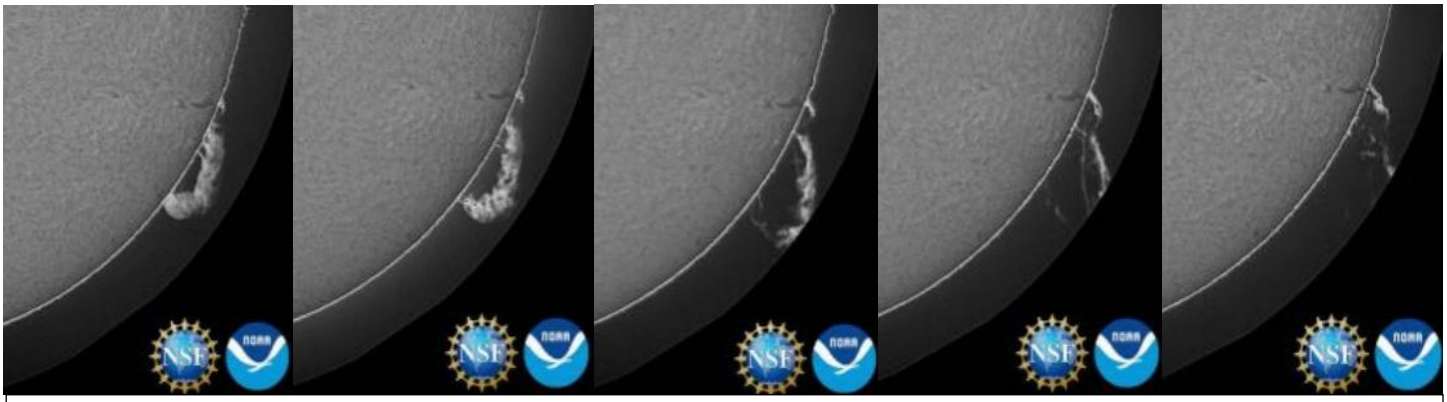
Centre Member Benefits

As a paid member in good standing of the RASC Winnipeg Centre, you receive a number of benefits from the local group in addition to any benefits that come from the national Society. These include:

Access to the **Glenlea Observatory**, which features a 12" Meade LX200 computer-controlled telescope under a dome, a 14.5" truss-tube Dobsonian reflector, and a warm room. There's also a concrete observing pad with power hook-ups to set up your own telescope.

Telescope Lending Library: The Centre also has a number of portable telescopes that members can borrow. Speak to Mike Karakas at a meeting to see what is available, and see the article on page XX for our latest addition!

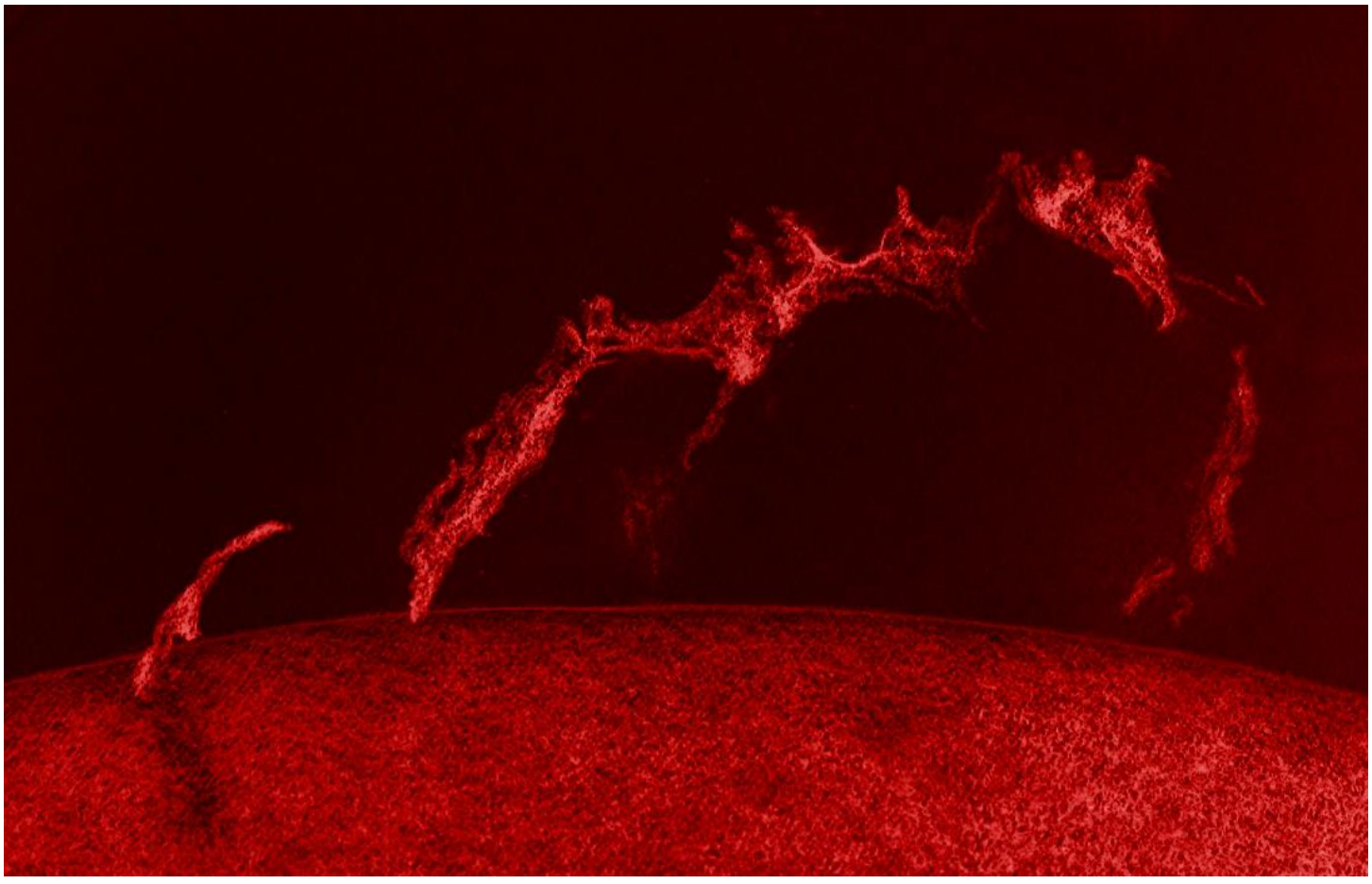
Online Forums: The Centre has a series of Forums on Groups.io (see page 10)

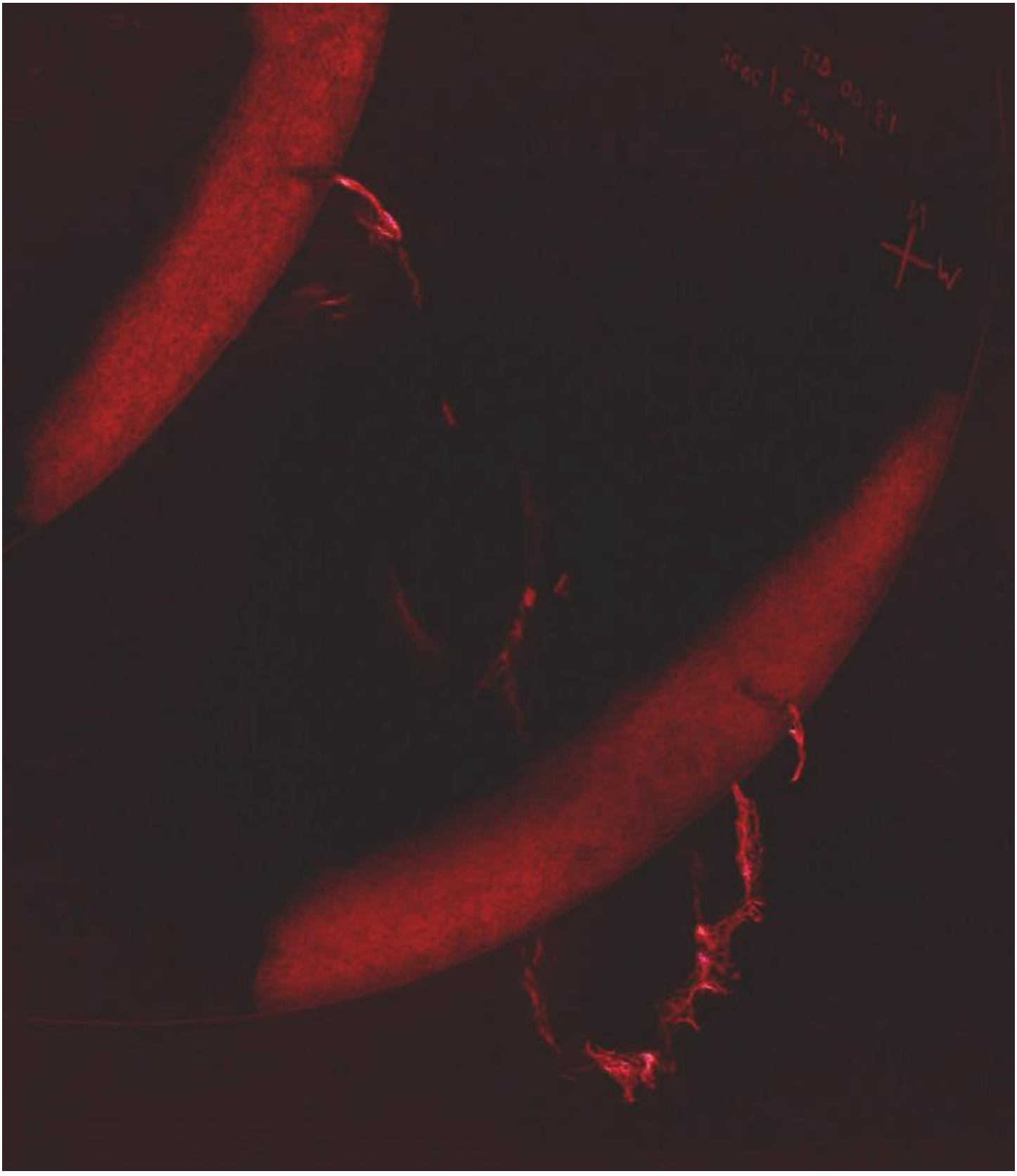


Above: A series of images of the eruption, taken every ten minutes beginning at 12:30 Central time by GONG's Cerro Tololo solar observatory (the best one to alert us to ongoing events we can see from Manitoba).

(continued from page 1) was over in a hour. I should have made a third sketch of the early stages. But with things moving so 'fast', I spent a lot of the initial time trying to see if I could get a sense of the motion. I would concentrate on certain distinguishing features and stare at them until I fogged the eyepiece but the motion was not detected even though it was thousands of kilometers per hour. Instead what I noticed was how the whole arch seemed to be dissipating as it moved outward. Each time I returned to the eyepiece to continue the sketching, the view had changed slightly making the sketches a time variable documentary of its structure by the time I got to the far end of the arch. So this is not quite a "snap shot" *(see image below)*.

I managed to do two sketches during the mid and late period of this explosive event *(see next page)*. With no time to find more paper both sketches are one sheet with the early image to the right and the late image to the left. Sketches were done using graphite and charcoal pencils on white paper. It was sketched as a negative and inverted after digitizing. North is up and West to the right so it's in the same orientation as the GONG images. Being the same scale, you can see just how much more the later *(...continued on page 7)*





Above: Gerry Smerchanski's sketches of a fast-moving solar eruption on March 7, 2025. Gerry writes: *"I managed to do two sketches during the mid and late period of this explosive event. With no time to find more paper both sketches are one one sheet with the early image to the right and the late image to the left. Sketches were done using graphite and charcoal pencils on white paper. It was sketched as a negative and inverted after digitizing. North is up and West to the right so it's in the same orientation as the GONG images. Being the same scale, you can see just how much more the later prominence had risen above the surface of the sun."*

prominence had risen above the surface of the sun.

There is one major flaw in these sketches in the rendering of the filament (dark band on the solar disk) that is the beginning of the prominence--the change in terminology when it moves off the face of the solar disk. Since filaments and prominences are essentially the same thing, they should have been sketched with the same level of brightness. However that is not how they appear to the observer due to a contrast effect where the bright disk of the sun makes the part of the prominence in front of the disk appear darker while the prominence appears much brighter than the dark background. I'm thinking that in the future I will break the rule of sketching the 'raw' visual sensation because careful examination can show that the brightness level observation can overcome the contrast illusion. After all, all observation is theory laden, is it not?

This prominence/filament was particularly bright and could be seen even when the scope was de-tuned right off the H-alpha band. That is a sign of a very energetic prominence that is emitting in a wider range of the spectrum. When observing in H-alpha, one should always check the view before fine tuning to check for such unusual features.

Hopefully the emblems of the National Science Foundation and the National Oceanographic and Atmospheric in the NISP/GONG images suffice as proper accreditation for their continuing work in monitoring the Sun. Here's hoping that these organizations can continue to produce scientific results well into the future despite the nefarious maniacs who are trying to destroy them.

New Loaner Scope: ZWO SeeStar S50 Smart Telescope

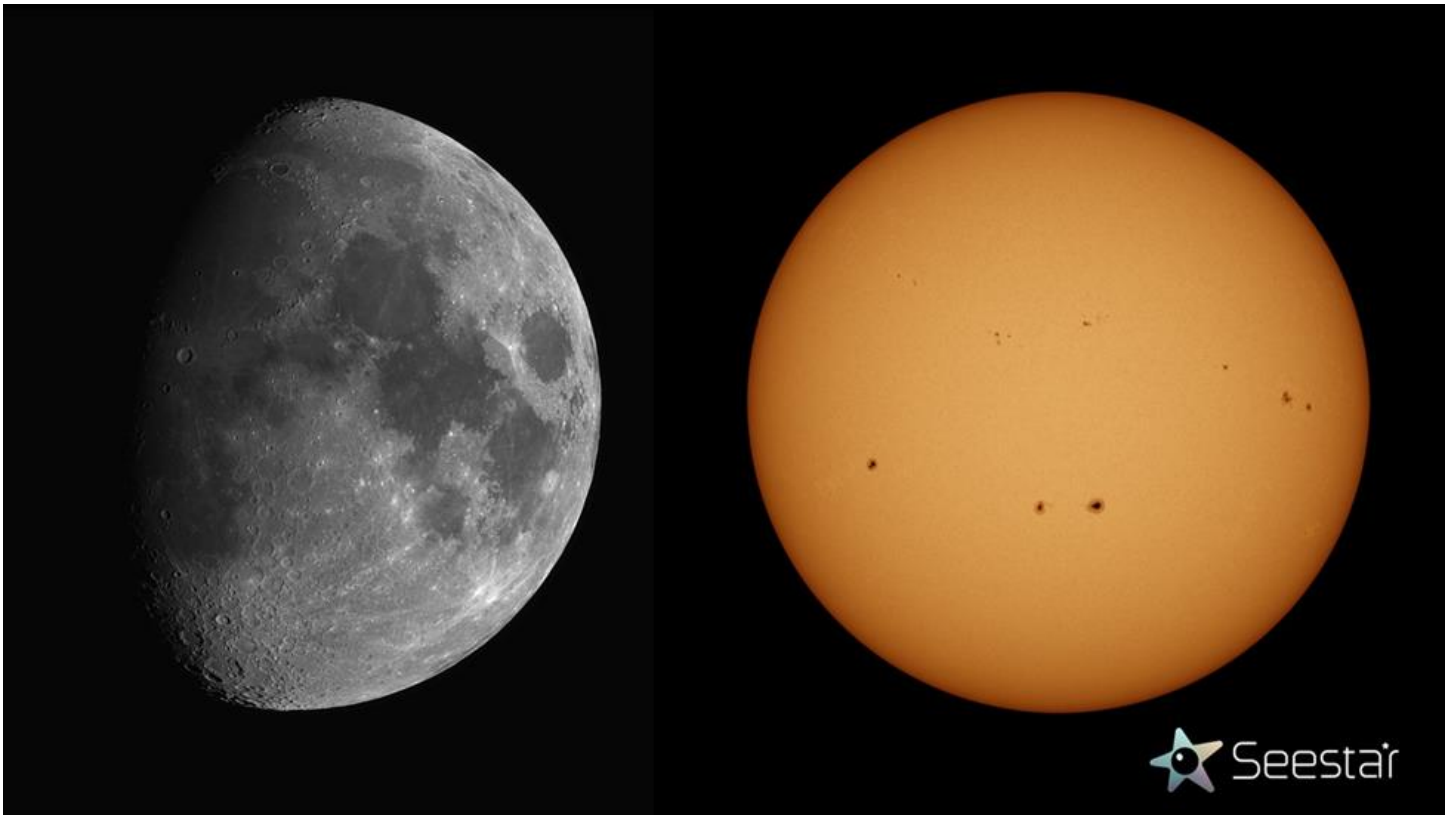
by Stan Runge

Having been involved in this wonderful hobby for over 50 years, I have seen a number of significant changes. After the do-it-yourself mirror grinding stage of the 1970's came the introduction of the Celestron Schmidt Cassigrain Telescope on a wedge mount. Later came the era of the Dobsonian Telescope, a simplified means of building very large aperture scopes on alt/azimuth mounts. More recently, the introduction of CCD and CMOS cameras have replaced film and revolutionized the imaging of the skies to the point that today's amateur routinely produces pictures often exceed the quality of those taken by large professional scopes in the 1950's.

I believe that we are in the midst of another major shift, with the introduction of smart telescopes. These devices are astrographs, made without eyepieces. Instead they use smartphones or tablets to immediately display images captured and processed.

After having borrowed a Seestar S50 from Kevin Galka, and seeing the images captured by Michelle Boyce's Dwarf II, I realized these scopes would be very popular. With Wing Kwong's persistent suggestions, I then approached Mike Karakas (the Centre's Loaner Scope Program Director) to discuss adding such a scope to our lending library. Of the four types currently owned by our members, we determined that for its price and capability, the Seestar S50 would be the unit to purchase. Our presentation to our Council was approved, and the unit arrived at the end of November.

The Seestar S50 represents a major shift from the time-consuming and expensive art of astroimaging. In a state-of-the-art electronic package, it combines an apochromatic telescope lens with a CMOS detector digital camera, an



Above: The Moon (left) and Sun as imaged by the SeeStar S50. Imaging the Sun requires the add-on solar filter, which is included in the Centre's loaner version. (Image: ZWO)

alt-azimuth GOTO mount, a sky atlas, a solar filter, other imaging filters, and a processing package to capture the night sky. It allows beginners, with minimum experience, to capture high-quality images of the sun, moon, and deep sky objects. Usually within 10 minutes of setting up.

Technical Details

The Seestar S50 has a 50mm f/4.9 apochromatic 250mm triplet lens coupled to a Sony IMX462 CMOS sensor. The camera is 1920 x 1080 pixels, providing a field of 1.29 by 0.73 degrees. It is packaged within a 2.5 kg housing which also contains a 6,000 mAh battery (rechargeable with a USB-C cable) to provide up to six hours of operation. The scope also comes with a 3/8-inch threaded 275 mm tall tripod, expandable to 363mm. Built in, the scope has a dew heater and a dual narrow-band nebula filter, as well as an add-on solar filter.

The scope is controlled by downloading and opening the Seestar app on an Apple or Android phone or tablet. The app is fairly easy to use, but we recommend that the loaner of the scope first review some of the many YouTube videos available, or access the Seestar S50 (Official ZWO Group) on Facebook. One appreciated aspect is that the ZWO group actively seeks owner's suggestions of possible improvements and is regularly adding them to the latest versions of the software. For example, they have incorporated a equatorial mode into the software. This would allow you to place the unit on an equatorial platform, aligned with the pole, and thus take longer exposures (avoiding the complications of field rotation experienced with alt azimuth mounts). In turn, they are increasing the maximum exposure times from 30 seconds to 2 minutes. This is very important when imaging very faint objects.

The S50 takes images in either photo mode or video mode. For the Sun and Moon, these allow you to use the internal stacking mode, to build up the image and improve the quality of the image. For deep sky, you can program the scope to take large numbers of individual images, which it constantly integrates (combines) into one image,

building up the captured light into a brighter image. It is fun to watch an image on your device become brighter and brighter. I particularly liked it when imaging comets, and seeing the tail become more visible and longer.

Although many people utilize the S50 for imaging, it is also useful for electronically-assisted observing (EAO) of deep sky objects, the Moon and the Sun. The scope has an atlas built into the software, allowing you to use the GOTO ability to find objects. Then you can set it to show Messier objects (for example) as they develop on the screen.

One additional aspect I like is that using the integration of very short exposures (10 sec), which helps avoid some of the damaging effect of light pollution. It amazed me how easy it was to image in city skies.

Other details of the S50 are:

- Built-in Wi-F-/Bluetooth for seamless connectivity.
- Built in Dual-Band Filter – this light pollution filter reduces the impact of urban light pollution plus moon-light. (It passes a 30-nm band for OIII, and a 20-nm band for H-alpha).
- Add on Solar Filter for safe white light solar imaging.
- Intelligent Workflow – Auto GOTO, tracking and plate solving via smart control on a mobile app. Choose your object on your device and the S50 will align to it and track it.
- Built in Star map and object database – Just a few clicks to access the lists and get detailed information about your chosen celestial target. Provides a list of tonight's best object recommendations, plus details of weather.
- Auto focus – The system will focus on your object for you, ensuring a crisp and sharp image
- Dual Imaging – The S50 can be used for astronomical objects (Sun, Moon, Deep Sky) but also to do day-time Scenery.
- Low power consumption – Batteries may last up to 6 hours, and the scope can be powered by an external source provided by a USB-C connection.
- Fully control your Imaging – It allows you to customize your imaging selections. Easily change the shutter speed on moon images to capture the crescent or the associated Earth shine.

The telescope includes a built-in memory of 64GB for photo storage, and saves files in MP4, AVI and TIFF formats. You can also choose to store all the individual images for later restacking and processing with third party software. Images can be easily copied to your computer with a USB-C cable.

The Seestar S50 smart telescope is intelligently designed for effortless star tracking and stunning captures. It is ready to use out of the box. With simple touched, it is your gateway to exploring the universe.

To borrow the scope, attend one of the regular meetings and speak to Mike Karakas, Director of the Telescope Loaner Program. The scope will be loaned out for a month at a time, and you must have been a member of the Winnipeg Centre for at least a year. *(Editor's Note: most other loaner scopes are available to members immediately upon joining the Centre.)* Based on the manufacturer's recommendation, the scope must be use in temperatures of above minus 10 Celsius.

Groups.IO: How to Use the Centre's Forums and E-Mail Lists

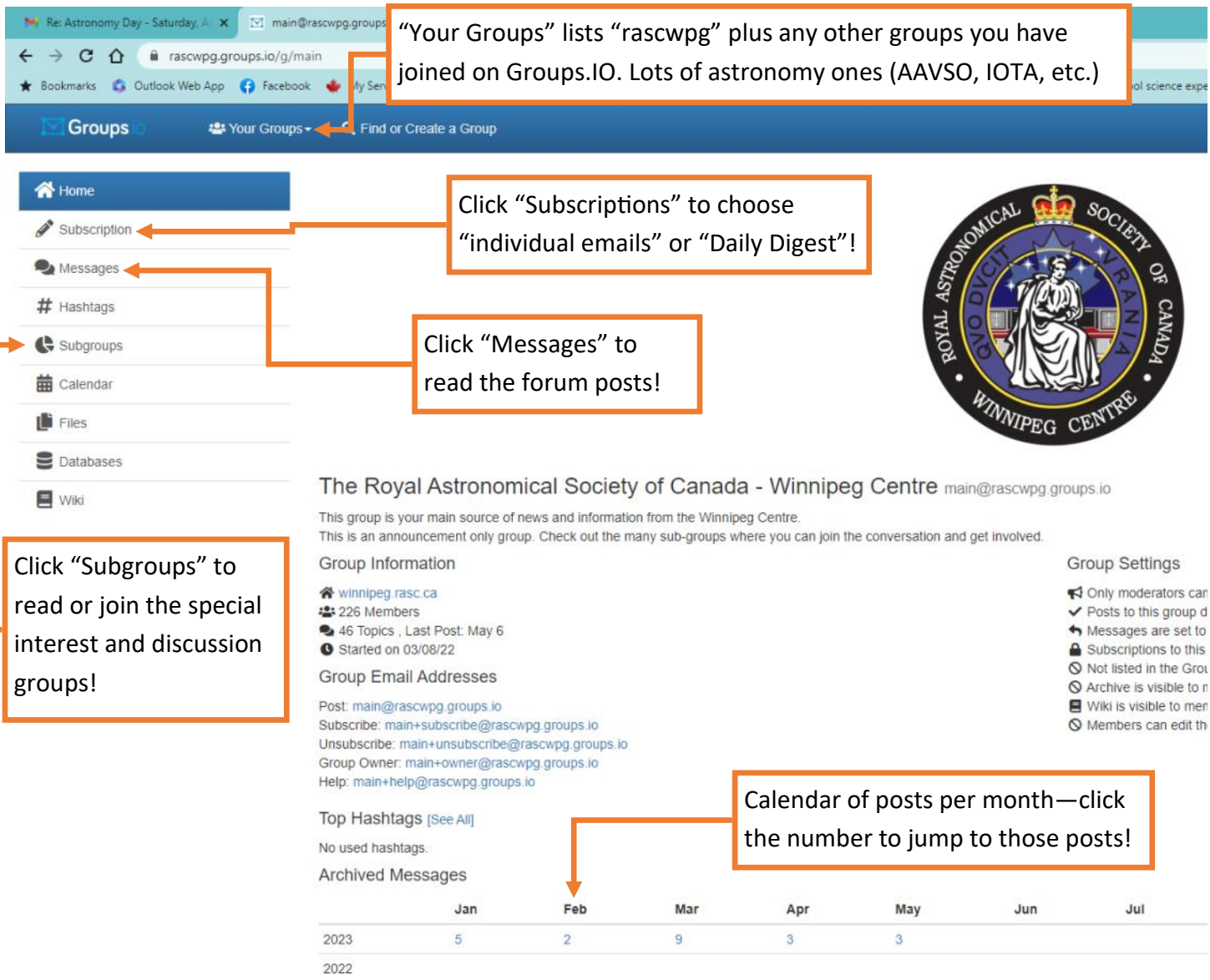
The Centre has moved to the Groups.IO platform for all of its forum and email services. This replaces the in-house forums and the old system of trying to mass-email all 200+ members. It really is a good system, both for the Council and for the users, but it is different and takes a bit of set-up.

If you've never used it before, it is very easy to access. Go to the website https://rascwpg.groups.io and click, "Forgot Password" when you are asked to log in. Enter the email that you used when you joined the Centre. You'll receive an email at that address telling you how to set up a password, and then you are good to go.

Once you've set up your password and logged in, you'll see a blue menu across the top of your screen. (See the next page for an annotated diagram.) If you click on "Your Groups", you will see that you are already subscribed to a group called "rascwpg.groups.io". This is the Centre's all-hands email, where we send meeting invitations, event news, and information we are required to send to all members (like calls for nominations for Board positions, news about the AGM, and so on).

When Council wants to send an email to everyone, they just make a post to this "main" group, and then everyone in the Centre gets an email. It helps prevent Centre mass emails from ending up in a spam folder or not getting through, and it also archives the email on the group where you can see it again. This "main" group can only be posted to by the Council Executive, and generates a few emails per month at most, so it shouldn't overwhelm most people with email.

(continued on page 11)



There's lots more than just the main announcement list, though. Click on "Subgroups" on the left-hand menu, and you'll be presented with a list of the various special interest forums attached to the rascwpg group. So far, there is a solar group, a sketching group, a binoculars group, a groups for posting astroimages,an armchair astronomy group, a buy & sell, an equipment discussion group, a solar system imaging group… you get the idea. If you are interested in a topic, click on that group and you'll be brought to that group's home page. You can click "join this group" here, and start getting the posts emailed to you, but you can also see how many messages have been posted in this group and even read them without joining. The calendar at the bottom shows how many posts were made each month, and by clicking on the number under a given month you will be shown the list of posts.

Some of the groups have a lot more discussion than others, though, and so you might not want 30 emails a day about a topic. Luckily, you can adjust the settings for each group. Go to the group you want to adjust, and click "Subscription" on the left-hand menu. This brings up the options for that group. You can elect to receive emails as individual messages as soon as they are posted—this is the best setting for the "rascwpg-main" group because it may contain timely information like a meeting change or observing session cancellation. For other groups where the information isn't time-sensitive, then "Daily Digest" is a good option—you'll only get one email a day from that group, containing all the posts that have been made that day. This prevents your email box from being flooded, but also sends you the content rather than you having to go look for it.

Every time someone posts to a group, every member of that group gets an email according to their personal settings. The emails are also archived, forming a valuable reference of the Centre's activities and discussions. There are some really good nuggets of wisdom in the forums already, and it would be a shame to lose them.

The key things to remember about Groups.IO:

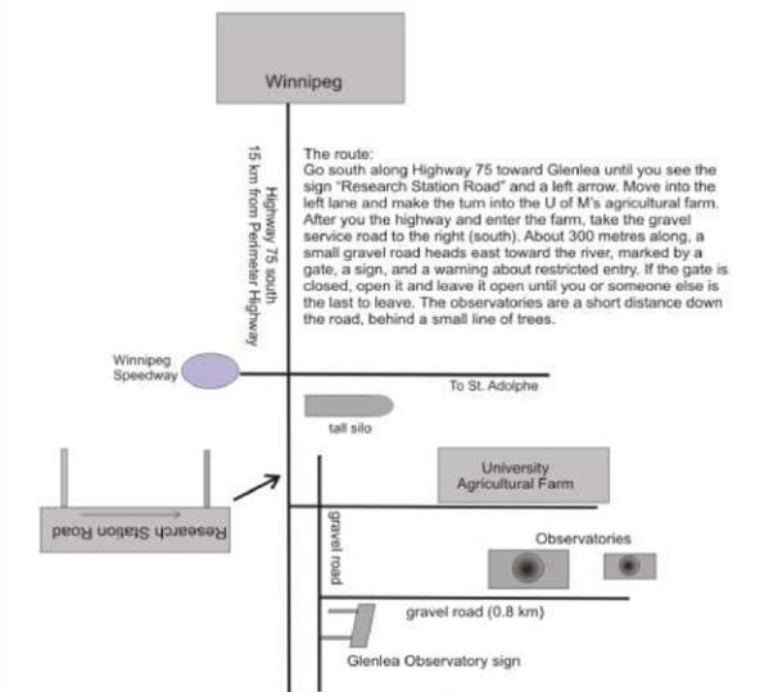
⇒ **if you unsubscribe from the "rascwpg-main" group, you will not receive Centre emails**—this is the only way they are sent out! Please don't do this, or you will not receive important information like notices of meetings, calls for elections, and other important stuff,

⇒ Most conversation happens in the "rascwpg-general" forum, which roughly duplicates the function of the old RASC email list. Other groups are more focused in their topic. If you're not sure where to post a specific question or idea, "general" is the place for it.

⇒ You have to set your email preferences for each group—if you want daily digests, you have to set that up in the group's home page.

If you'd like help getting set up on Groups.IO, email newsletter@winnipeg.rasc.ca and we'll figure out a way to walk you through it.

Glenlea Observatory

The Winnipeg Centre maintains a working observatory, pad, and warm room at the University of Manitoba's Research Farm. The observatory dome contains a 30cm (12") Meade LX200 telescope on a fork mounting. Members of the Centre who have taken the training course can reserve this telescope by emailing observatory@winnipeg.rasc.ca.

Etiquette requires that you approach the observing site with your headlights off if that's possible on your model of car. Headlights should remain off, but you can still use your parking lights to drive. Proceed slowly, and be careful about parked cars along the road, or people walking. If you cannot turn off your headlights, make a cardboard or garbage bag mask to dim the lights or, raise the parking brake lever one click-stop. This usually turns the headlights off on most, if not all, cars. You might wish to turn around at the end of the road so that you are facing the direction back toward the highway at the end of the evening.