Winnicentrics

Newsletter of the RASC Winnipeg Centre

January/February 2025

Events at a Glance

Fri Jan. 10, 2025:
Monthly Meeting
Featured Speaker: Dr. Jayanne English (see page X)

Sat Jan. 11, 2025:
Members' Observing Night
Glenlea Observatory,
6pm start (see page X)

Saturday, Jan. 18, 2025:
Holiday Potluck
See page XX

Wednesday, Feb. 12, 2025:
Introductory Stellarium
Zoom workshop (see page XX)

Friday, Feb. 21, 2025:
Monthly Meeting
Featured Topic: Smart Telescopes (see page X)

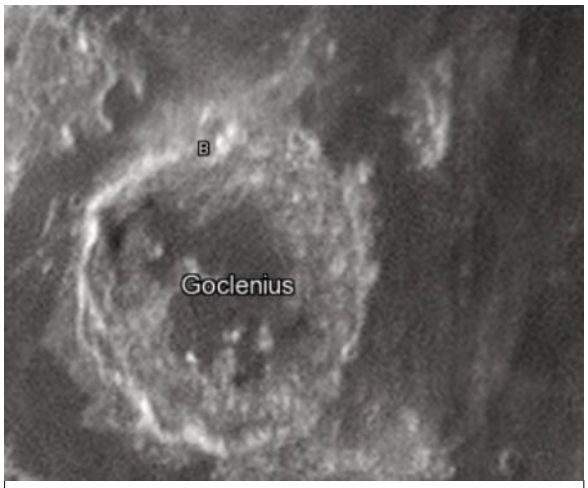
Saturday, Feb. 22, 2025:
Members' Observing Night
Glenlea Observatory,
6pm start (see page X)

Wednesday, Feb. 26, 2025:
Intermediate Stellarium
Zoom workshop (see page XX)

New Views of an Old Friend

by Gerry Smerchanski

Most astronomers don't spend a lot of time observing at the time of full moon, let alone actually *looking* at the full moon. It's bright and without shadows and lacks much of what makes the moon interesting. The very partial eclipse of September 17th, 2024 got a lot of people out looking at the full moon, but most would just be concentrating on the earth's shadow even though barely any of the umbra would be obscuring the moon's north pole. With such a conveniently timed and placed event, it was hard to avoid, but being a very partial eclipse many would glance at it or perhaps take a quick peek through a telescope. I did the same with an expectation of it being a brief session.



Above: The lunar crater Goclenius drew observer Gerry Smerchanski's eye during the September 17th partial lunar eclipse. (Image: Wikipedia)

Even though the moon's appearance was barely altered, with *(continued on page 5)*

Easter Island Annular Eclipse

by Judy Anderson

Jay and I had the distinct experience of travelling to Rapa Nui (Easter Island, Chile) for the annular solar eclipse on October 2nd. We had visited there before, and this time, the sights, flavours, and experiences melded together in a most welcoming, almost gentle fashion.

Seemingly everyone had experienced a total solar eclipse in 2010, and knew to take this annular "in stride", so to speak - they were prepared with eclipse glasses (augmented by a donated 500 more from NASA to the schools). That meant people knew why we were there.

The Chileans had supported artists during the pandemic and carvings greeted us from sidewalks and at park gates. With a strong, local tourism industry, there were already astronomy tours on the mainland. This meant we were able to arrange for dark, starlit nights to observe the southern skies behind silhouetted moai statues, gazing inland and Magellanic Clouds hovering over palm trees. Such a wealth of things to see and do on that small island! *(continued on page 7)*

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Email observatory@winnipeg.rasc.ca

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YouTube: RASC Winnipeg
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 Dennis Lyons,

Winnipeg Centre President

Good day everyone,

As we write this the holiday season is drawing to a close as is the year. This last year was a great one for observing the skies of Manitoba for celestial events. The RASC Winnipeg Centre, Inc. has had a busy year with workshops, outreach events and get-togethers.

It is always a wonderful feeling when we as a group are able to meet—especially under the stars. What is truly special is the diversity of our membership and its ability to share the science of astronomy with those around us. A great example was the partial eclipse this past April where members gathered at The Leaf at Assiniboine Park to gaze at the sun (with protection) and between the clouds. Hundreds of people came out and it was an awesome experience.

To all of our members, I thank you for this great work you do for both the science of astronomy and how to share your time and passion with our neighbours. The next year is looking to be another good year for astronomy and hopefully another Dark Sky Preserve. In closing I hope to see you all at our Winter Gathering on January 18.

Clear skies,

Dennis Lyons,
President, RASC Winnipeg Centre

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.

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

Other local benefits such as attending **meetings** and **special events**, a **mentoring** program for beginners, this **newsletter**, **voting rights** at the Centre's Annual General Meeting (usually held in January each year), and **opportunity to serve** on the Centre Council – the group of folks who put together meetings and run the Centre!

JANUARY CENTRE EVENTS

Monthly Meeting Friday, January 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. After the meeting's conclusion, members are invited to retire to Boston Pizza on Pembina Highway south of Bison Drive for an informal social gathering. (Unfortunately Boston Pizza is not live-streamed.)
7:00 p.m. Beginner Session - gAIL Wise's Constellation of the Month: "Pisces" 7:30 p.m. Main Meeting • Dennis Lyons, Welcome & Announcements • Bryan Stach—*"What's Up?"* • Dr. Danielle Pahud—*"What's New"* **Featured Speaker: Dr. Jayanne English** Jayanne is an astronomer and artist who has worked with the Hubble Space Telescope's Heritage Project and with many other observatories and organizations around the world. She is the 2021 recipient of the Canadian Astronomical Society's Qilak Prize for Astronomy Outreach and Communication.	

Saturday, Jan. 11, 2025: Members Observing Night

Join us starting at 6:00 p.m. for a look at Jupiter and Mars! Sunset is actually about 4:46 p.m. but your host Scott Young won't be there to open the warm room until closer to 6. We'll have facilities for people to stick their cell phone or CMOS camera onto the big scope to take some planet images.

Saturday, Jan. 18, 2025: New Year Potluck Dinner

An event for members and their significant others. Potluck dinner and social event beginning at 6 p.m. at Launch Coworking (Exchange District), Suite 500 - 167 Lombard Avenue, Winnipeg. Bring a dish for sharing and serving utensils for the buffet. There will be hot trays and refrigerator space available. Full-service bar or BYOB. The event is also a fundraiser for our *Telescopes for Kids* program, with a silent auction and raffle plus astronomical items available for purchase.

January Sky Highlights

⇒ the **Quadrantid meteor shower** peaks just before dawn on January 3rd, in a moonless sky. Observed rates may range from 20-80 meteors per hour, but the average brightness for Quadrantids is faint and so you'll need dark skies to see that many.

⇒ **Venus** and **Mars** are both at their best this month, with Venus reaching greatest elongation from the Sun and the highest point in the evening sky for the year. Mars reaches opposition on January 16, with its brightest and closest views occurring within a few days of that date.

⇒ **Jupiter** is technically past its best but still dominates the south after Venus sets. The *2025 Observer's Handbook* lists the nightly positions of Jupiter's four largest moons as well as several instances where two or more moons are casting their shadow ontop the planet at the same time.

February Centre Events

Monthly Meeting	
Friday, February 21, 2025 **NOTE DATE CHANGE!** **7:00 p.m. Beginner Session** - Scott Young, **7:30 p.m. Main Meeting** • Dennis Lyons, Welcome & Announcements • Bryan Stach—*"What's Up?"* • Dr. Michelle Boyce—*"What's New"* • **Featured Topic: Smart Telescopes!** The astroimaging world is abuzz with small, fully automated "smart" telescopes. Please contribute an image or three so you can share your experiences with the group. Images can be sent to Judy Anderson at Judy.Anderson@winnipeg.rasc.ca.	Delayed one week to avoid overlapping Valentine's Day. We meet 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. After the meeting's conclusion, members are invited to retire to Boston Pizza on Pembina Highway south of Bison Drive for an informal social gathering. (Unfortunately Boston Pizza is not live-streamed.)

Wednesday, February 12, 2025: Introductory Stellarium Workshop

Learn how to use the popular and free planetarium program Stellarium to plan your observing, find out what's up, and see what you can expect to see in your telescope. This is a Zoom event for Winnipeg Centre members only. See details on page 9. Register here.

Saturday, February 22, 2025: Members' Observing Night at Glenlea

Start time 6:00p.m. Monthly observing night for members. Bring your scope or use the Centre's 12" LX200 in the dome. We'll have dark skies due to the last quarter moon, and it's a perfect time to catch the Orion Nebula and other winter treats in slightly warmer conditions. Plus, Jupiter and Mars will still be showpieces. Hosted this month by Scott Young.

Wednesday, February 26, 2025: Intermediate Stellarium Workshop

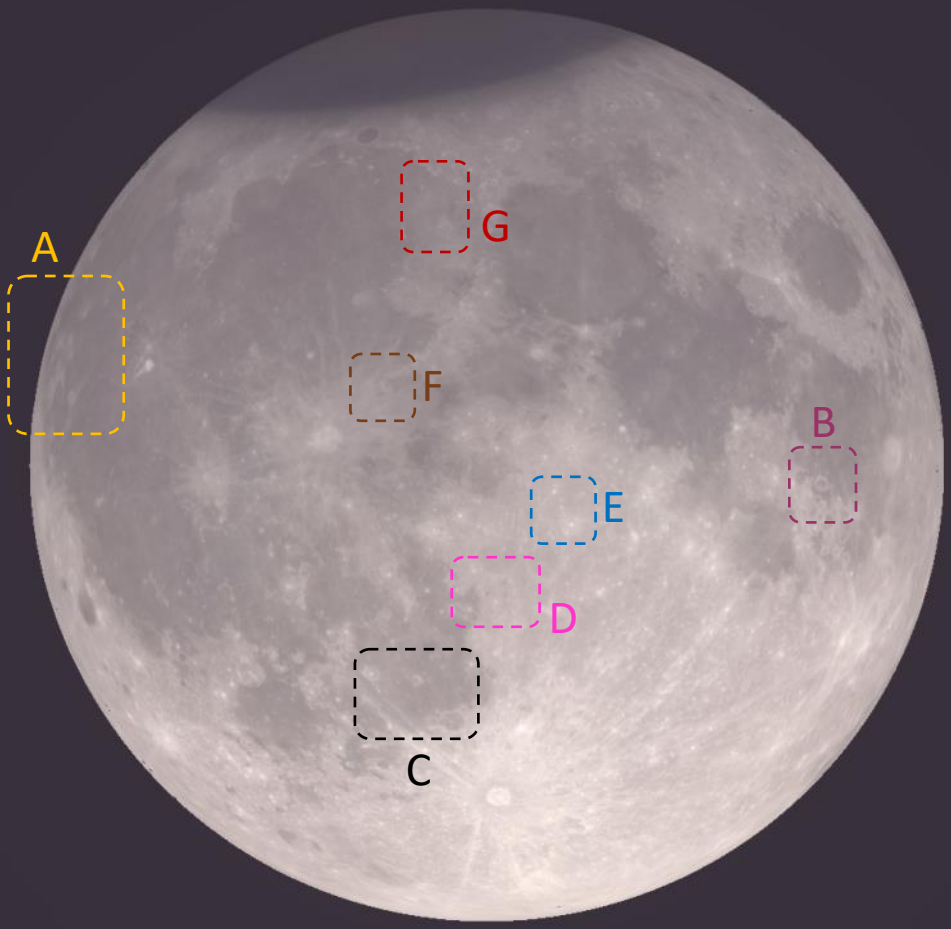
Learn how to use the popular and free planetarium program Stellarium to plan your observing, find out what's up, and see what you can expect to see in your telescope. This is a Zoom event for Winnipeg Centre members only. See details on page 9. Register here.

February 2025 Sky Highlights

⇒ The **waxing crescent Moon** makes a nice pairing with **Venus** in the evening sky on February 1st.

⇒ Just past First Quarter, the **Moon** is near the **Pleiades** on the evening of February 5th, covering (or occulting) several of the stars before setting.

⇒ **Venus** is at its best in the evening sky, reaching its highest altitude on February 7th and its brightest on February 16th.



A simulated view of the inspiration for this article, the partial lunar eclipse of September 17, 2024. Areas referred to in the text are labelled.

[Image: Stellarium]

(continued from page 1) only the very top showing signs of darkening, one could see that the sky was noticeably darker with many more stars appearing with the lack of the full moon brightness. (The digital images greatly exaggerate the visual look of this partial eclipse as they try to get a proper exposure for the bright bottom part and underexpose the dim northern part--making for a more dramatic difference and more pronounced darkening than what it looked like visually.)

The next realization was that even through a small telescope, the moon was not overly bright and was actually quite comfortable for extended viewing. No wonder neutral density “moon” filters are popular!

The first oddity that made me pay attention was all the unusually bright scattering of craterlets on the northern plains above the crater Grimaldi on the moons western limb (“A” on the image above). These craterlets being near the limb should not be getting a whole lot of light given the sun angle, but they were unusually bright to the point of appearing to float above the western 'shore' of Oceanus Procellarum.

The next object to be noticed was the crater Goclenius in Mare Fecunditatis (“B” on the map, see image on page 1). It has never really stood out to me before, but now it looked blurry-- as if some kid with a piece of chalk kept making circles over and over in the same spot. This appearance of this crater, which already has an odd appearance, was most likely due to the scale at which it was being observed in that flat low-contrast scene. It was difficult to focus on the actual shape as it appeared as a fuzzy multiple image.

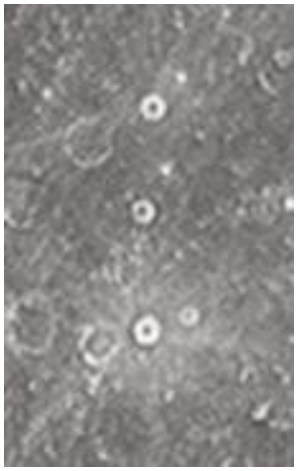
Scale—a direct result of magnification— is crucial in the appearance of many of these oddities. For instance, during the partial eclipse, with no magnification, there appeared a new area at the bottom of Mare Nubium (“C” on the image above) that now seemed to be the darkest spot on the moon. A quick perusal of many full moon images doesn't show this to be the case, and indeed in binoculars or telescope that night it didn't look to be the darkest area--it was

only the naked eye view where it looked darkest even with the northern limb getting dark from the shadow. This appears to be a contrast effect due to the bright highland region that surrounds the bottom of Mare Nubium.

Above: The lunar crater Alphonsus' three dark spots, imaged by NASA's Lunar Reconnaissance Orbiter.

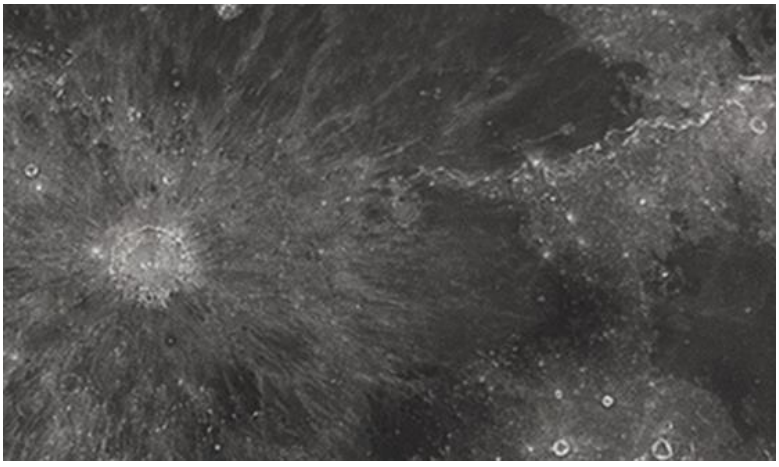
Perhaps a similar phenomena was occurring when looking for the darkest areas on the full moon through an 80mm telescope. Usually with a full moon this occurs slightly north of the very center of a full moon in the Mare Vaporum region near Hyginus crater or the eastern edge of Sinus Aestuum. But under these conditions, three little dark spots stood out far more prominently even though they were further away from the darkening shadow on the north limb. These were three small dark spots in the crater Alphonsus ("D" on the image on the previous page, with a close-up image, right) that looked very dark in the subdued light. These dark spots have been noted throughout history, but it doesn't seem that anyone noted just how dark they can appear. On that night they clearly stood out almost as notably darker than other noteworthy dark regions. Again, was this a result of contrast with the rest of the surrounding crater floor and the rest of the lunar highlands?

Magnification also revealed a changing perception of another intriguing noteworthy feature-- the 'doughnut' craters, Pickering and Hipparchus C and G-- all about the same size and shape. At low magnification, a series of small craters ("E" on the big image) near the center all seemed to have tiny black spots in an otherwise bright white spots. Under much greater magnification, the tiny black spots turned out to be merely darker crater floors. Now other full moon pictures show a similar effect with craters under certain magnifications and have these craters that look like bright doughnuts, so this is not so unusual, but the sharp defined black point in the bright circle in this subdued light is still startling. We seldom appreciate just how much the scale of our subject is affecting how we interpret it. Sometimes going into the realm of "empty magnification" can be diagnostic despite what the old time astronomers tell us.



Above: "Doughnut" craters.

Traveling northward towards where the shadow was more pronounced, produced a few other revelations. One of the curious issues at the time of a full moon is the disappearance of the noteworthy and familiar crater Eratosthenes ("F" on the big image). This crater is notoriously hard to make out at times of full moon--especially when it is so prominent at other sun angles. It just has contrast features that make it difficult to see when the light is shining directly down on it. The enlarged image to right should show the crater Eratosthenes in the middle, but it disappears in the contrast effects.



Above: Eratosthenes disappears in the center of this image between the bright crater Copernicus (left) and the curved line of the Lunar Apennines Mountains (right). *(image: Wikipedia)*

This is also how it appears in many full moon images and that was doubly so during this partial eclipse and yet I have not seen reference to this 'disappearing' crater. Even though much had changed in lighting and contrast, Eratosthenes remained stubbornly hard to see. Try it for yourself at the next full moon and see what you can see.

The most northern feature of note and the one deepest into the earths shadow was the Pallus Putridinis region in eastern Mare Imbrium ("G" on the image on page 5). There is nothing specific to say about this region except to say that it looked very different than it does under any other lighting condition. There are all sorts of subtle contrasting surfaces that do not have the same range and order as it does during normal full moons. It would have been good to get some proper exposures of this region in the dim light. A quick search of the internet didn't show the region anything like it did that night. A sketch showing the visual impact would be apropos, but it wasn't feasible under the circumstances. Perhaps next time.

January Challenge

Our January Members Observing Night at Glenlea takes place two days before Full Moon. Let's take up Gerry's challenge and track down the "disappearing" crater Eratosthenes while we're there!

Speaking of next time, there will be a lot more attention paid to the lowly partial eclipses that have been foolishly ignored and downplayed up to now. Lesson learned!

Easter Island Eclipse (continued from page 1)

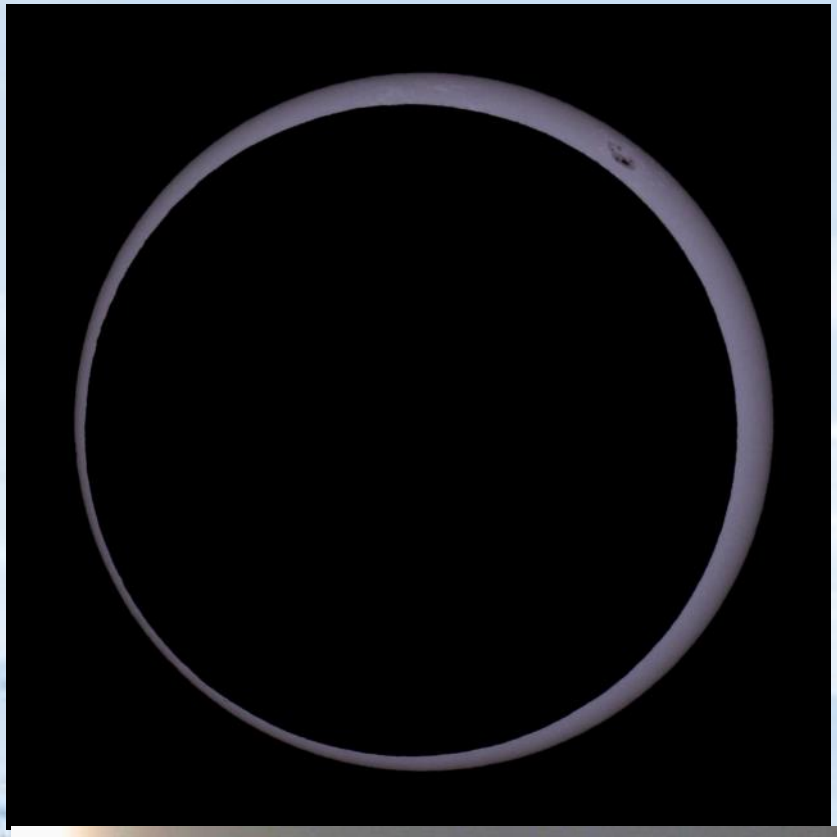
Eclipse day dawned mostly clear, and clouds dissipated completely by first contact - the sun high in the sky. A scattering of fairly large sunspots decorated the solar disk and made focusing a little more precise.

We were located on a hillside looking out over the moai of Ahi Tahai and Ahu Ko Te Riki, right at the ocean's edge. It was impossible to approach those iconic figures closely enough to capture both it and the eclipse, as much as we'd hoped might be possible. The moai are all on protected archeological sites; in fact much of the island is a national park, and travel or hiking outside of the town and residential or farming areas, requires a guide and park ranger.

While the partial phases proceeded toward 2nd contact, we watched (and photographed) the sun through filters and eclipse glasses, Jay walking amongst local residents and tourists while I checked the camera settings and monitored the tracking. Just before C2, off came the filter so I could watch and image the chromosphere, Baily's beads and a few nice prominences. Periodically I placed the filter over the lens and imaged the ring, still marked with one lovely sunspot, as it went from off-centre to central and back — each glance at the ring made me more determined to see those beads and chromosphere again! It seemed a very long eclipse - longer than the 6 minutes and 19.5 seconds of annularity!

(continued on next page)

Above: Jay Anderson observes the sun with Man's Best Friend as a pillow, and the iconic moai statues of Rapa Nui in the background. *(image: Judy Anderson)*



We had 6 days on the island and enjoyed the whole time! We hiked around the rim of a volcanic crater that had blown out toward the ocean, eating ripe guavas we picked in the forest on our way downhill. We walked through the quarry where moai were carved and excavated, some left akimbo or recumbent on the hillside. And we re-met friends from previous eclipses and made new friends, Every day was full of adventure and good times. A local dog even curled up at Jay's head as he watched the eclipse lying on the grass; a perfect view at just the right inclination! And we're both inclined to see the next one! 2026 isn't that long to wait!

Two images of the annular solar eclipse of October 2, 2024, by Judy Anderson. Judy and her husband Jay observed the eclipse from the island of Rapa Nui in the Pacific Ocean.

RASC Winnipeg Centre – Stellarium Training Workshop

Level 1 Introduction: Wednesday February 12, 2025 (7:30PM – 9:00PM)

Level 2 Intermediate: Wednesday February 26, 2025 (7:30PM – 9:00PM)

Where: Online via Zoom (registration required – see below)

What is Stellarium?

Stellarium is a powerful planetarium program that helps us learn and navigate through the sky and can be a great aid in planning your viewing and/or imaging sessions. The full program which runs on Windows, Macintosh, and Linux computers is completely free to download and use. There are iOS and Android versions available to run on a phone or tablet, but typically these have a one-time fee associated with them and while very handy to have out in the field do not offer all the features of the full program. This training is designed for new and intermediate users of Stellarium and will focus on the full version running on Windows.

What You Will Learn

Level 1 - Introduction

- ⇒ Navigating controls (panning, zooming, searching, and selecting objects)
- ⇒ Object information review
- ⇒ Bottom and side menus
- ⇒ Essential optional buttons to enable your toolbar
- ⇒ Customizing object information display
- ⇒ Changing and saving settings and preferences
- ⇒ Simulated views (adding a telescope, eyepiece, and camera)

Level 2 - Intermediate

- ⇒ Taking screen captures any copying object information
- ⇒ Plug-ins / Solar System Editor
- ⇒ Additional controls, step zooming, time dragging
- ⇒ Telescope control
- ⇒ Adding custom horizons

About the training

The training will be offered online via Zoom and is meant to be hands-on and interactive where the participants follow along on their own computer. The ideal setup is to have two screens, one on which you can run the Zoom meeting to see the instructor's screen, and a second screen where you can have your own Stellarium program running. Here are a few ways to consider setting up for the Zoom meeting.

For the meeting we ask that you already have Stellarium downloaded, installed and running on your computer. We will not be helping with or allowing time to install the program during the meeting. If you come to the meeting before installing the program, you can still watch but won't get the full benefit of the training. The program can be download at Stellarium.org and the most current version is Stellarium 24.3 – although earlier versions will work, we suggest you update to at least version 24.1 or later. While a few years and versions old, a detailed guide to downloading, installing, and running Stellarium can be viewed here. If you still need help installing the program, please contact us well in advance of the meeting.

Registration

The training will be provided online and registration in advance is required. You will receive the Zoom meeting link once your membership is confirmed.

Select the registration links below:

Level 1 Introduction: Wednesday February 12, 2025 (7:30PM – 9:00PM)

Level 2 Intermediate: Wednesday February 26, 2025 (7:30PM – 9:00PM)

James Fast / Scott Young / Wing Kwong

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

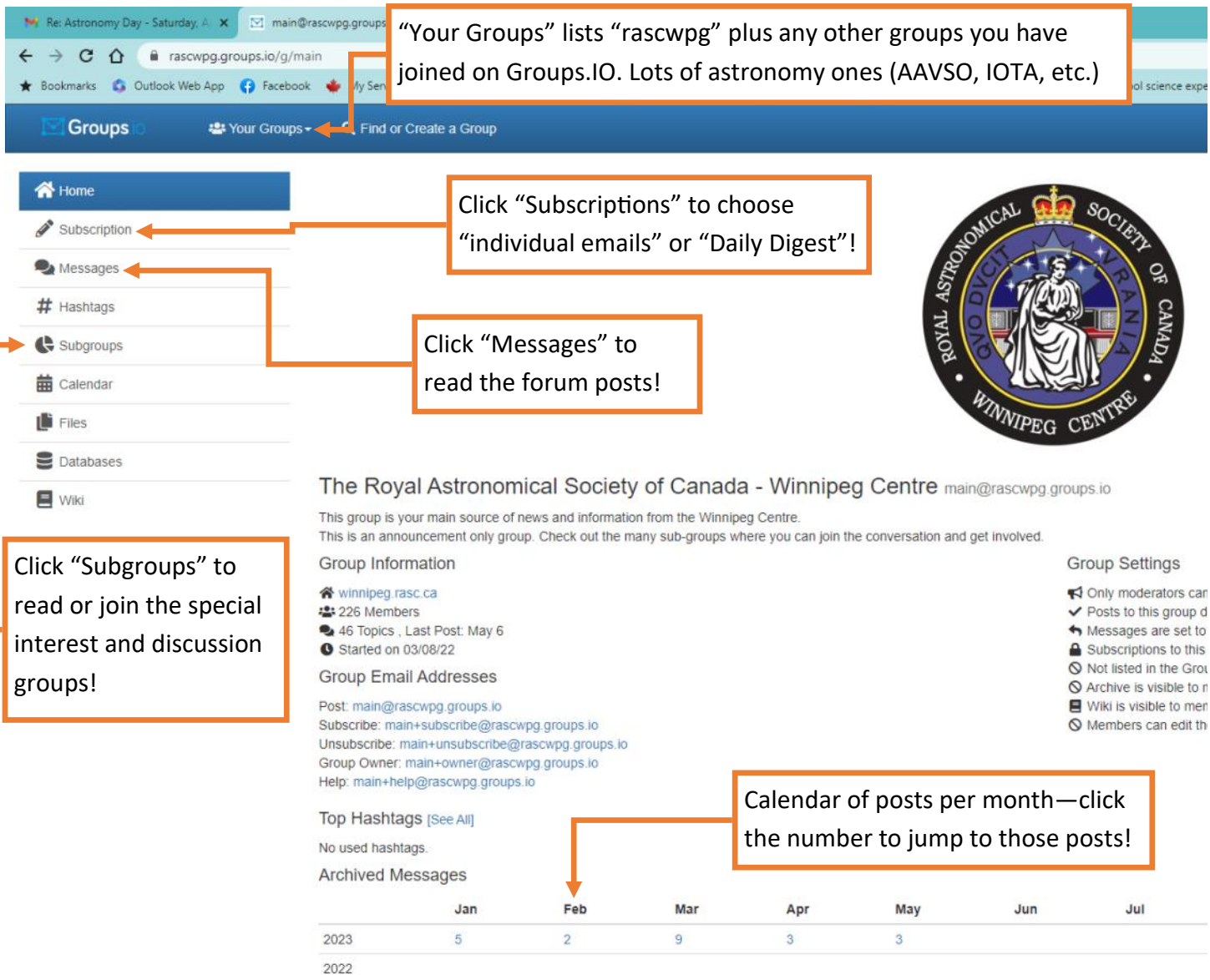
The Centre has moved to the Groups.IO platform for all of its forum and email services. This replaces the in-house forums and the old system of trying to mass-email all 200+ members. It really is a good system, both for the Council and for the users, but it is different and takes a bit of set-up.

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:

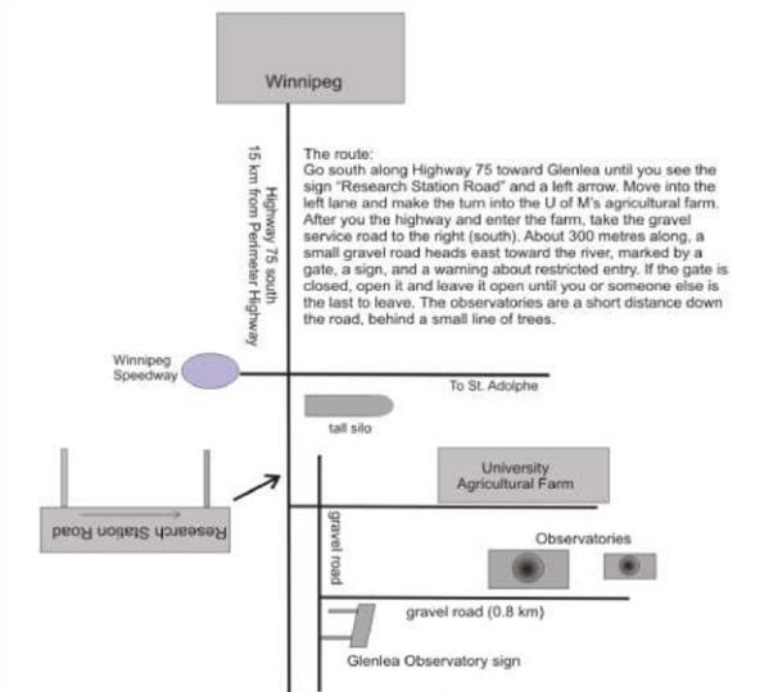
⇒ **if you unsubscribe from the "rascwpg-main" group, you will not receive Centre emails**—this is the only way they are sent out! Please don't do this, or you will not receive important information like noties of meetings, calls for elections, and other important stuff,

⇒ 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.