Winnicentrics

Newsletter of the RASC Winnipeg Centre

January/February 2024

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

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

Centre at a Glance

Friday, Jan. 12, 2024:
Monthly Meeting
Beginner's Session: Scott Young
Featured Speaker: Dr. Allison Man

Saturday, Jan. 13, 2024:
Members' Observing Night
Member event at Glenlea 6pm
Host: Mark Irvine

Saturday, Jan. 20, 2024:
Winter Potluck
See page 3 for details

Sunday, Jan. 28, 2024:
Workshop—Planetary Image Processing
See page 3 for details

Friday, Feb. 9, 2024:
Monthly Meeting
Beginner's Session: gAIL Wise
Featured Speaker: Chris Vaughan

Saturday, Feb. 10, 2024:
Members' Observing Night
Member event at Glenlea 6pm
Host: Judy Anderson

Top Events of 2024: A Preview

by Scott Young

Now that the arbitrary counter which marks the Earth's orbit has been reset, it's traditional to reflect on the past orbit and look ahead to the next one. Let's look at the top events in astronomy and space science for the year 2024 CE.

Number One: The Solar Eclipse

The April 8, 2024 solar eclipse is certainly at the top of many people's list, especially in North America. Most of the continent will see a partial solar eclipse, while those lucky enough to live (or travel to) the center line will experience a total solar eclipse, one of nature's most beautiful and mesmerizing spectacles. The path of totality runs from the Pacific coast of Mexico up through Texas through the mid-west before entering Canada. From southern Ontario the path just misses Toronto before going through Kingston, the south shore of Montreal, and the state of Maine before crossing New Brunswick, part of Prince Edward Island, and central Newfoundland. It's the first total solar eclipse in Canada since 2008, when a small segment of Nunavut experienced totality. Southern Canada hasn't been in the Moon's shadow since February 26, 1979, an eclipse that figures prominently in the memories of many Winnipeg Centre RASCals.

There will be many more stories leading up to this eclipse, so here we will offer just a summary: April weather is terrible in general, and most of the Canadian portion of the path has a less-than-even chance of being clear on the day (only eastern New Brunswick makes it above a 50% chance of clear skies). Drier air is to be had farther south in Texas, but even still weather isn't as good. Mobility will be important if you chase the shadow this spring.

In Manitoba we weill see a partial solar eclipse, with about the same half-coverage as we had in October 2023. A public event is planned with more details to be released closer to eclipse day. Hopefully we will have better weather than our last eclipse event!

Canada in Space

2024 is a big year for Canada's presence in space, as well. Canadian astronaut Jeremy Hansen is deep in training for the Artemis 2 mission, tentatively scheduled for November 2024. Hansen will become the most-traveled Canadian when Artemis 2 loops around the far side of the Moon on its 10-day flight. His colleague Jenny Sidey has been assigned as back-up for the mission, which generally means she would fly the next Artemis flight that has a Canadian component. We know that Canada got two seats in exchange for its contribution of *(continued on page 5)*

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Secretary: Ed Wright
Treasurer: Mark Irvine
Past President: Bryan Stach
Councillors:
Michelle Boyce
Russell Brown
Mike Karakas
Kamala Kodi
Daemon Nightshade
Stan Runge
Marc Sarrasin
Scott Young

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Spruce Woods Star Party Chair 2024: <vacant>

Webmaster:
Marc Sarrasin

Winnicentrics Editor:
Scott Young

Observatory Booking:
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Visit us online!

Website: Winnipeg.RASC.CA
Facebook: RASC Winnipeg
YouTube: RASC Winnipeg
Forums: rascwpg.groups.io
(For details on how to use the forums and join the various subgroups, see page 11.)

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

The President's Corner

by Dennis Lyons, Winnipeg Centre President

Happy New Year everyone! Well, another year of observing is behind us and another awesome year is ahead of us. This January we begin our fundraising and promotion of Telescopes for Kids. I hope you can help the Centre in promoting this outreach in whatever way you can. We will also be hosting our New Year get together for all members and hope you can come out and share your favourite meal or snack. There will be a fundraiser for Telescopes for Kids with more to follow at this event.

On March 8 we will hold our Annual General Meeting (AGM) and we are recruiting for five Director positions and Secretary. If you have some interest in any of these positions please let Stan Runge, Bryan Stach, or myself know.

Of course, in April is the eclipse. For those who are not travelling to see the total eclipse we are planning an event here in Winnipeg open to the public if we can get enough volunteers.

Outreach events are starting to come in and the first one is for January 19 (backup 26) for Wild Outside. If you are able to volunteer, please let Daemon Nightshade know.

Finally, Council will be hosting a series of workshops this year. The first on imaging processing will be held January 28. The next one will be the telescope/binocular tune up for March 22.

All of this in addition to looking at what the Observatory Committee is working on. Well, I hope you all have a wonderful New Year filled with clear skies (because no one got a new scope, right!) and good friendships observing.

Cheers,

Dennis Lyons,
President

Centre News

⇒ **Glenlea Upgrade:** The Centre's 12" Meade LX200 Schmidt-Cassegrain telescope has been ungraded with a new fork mount and drive system. The manual is being re-written, but the new mount is much easier to set up and align since it has equipped with GPS and a more modern controller.

⇒ The Centre has started to produce workshops on various topics of interest to members. Two are announced in this issue of Winnicentrics. If there is a workshop topic you'd like to see, let someone on Council know!

⇒ Telescopes for Kids is on again—see details on page 6.

JANUARY CENTRE EVENTS

Monthly Meeting Friday, Jan. 12, 2024	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. (This portion of the meeting is not available online or live-streamed.)
7:00 p.m. Beginner Session - Scott Young, "Life and Death in the Winter Sky" **7:30 p.m. Main Meeting** • Dennis Lyons, Welcome & Announcements • Bryan Stach—*"What's Up?"* • Dr. Michelle Boyce—*"What's New"* • **Featured Speaker:** Dr. Allison Man, Assistant Professor at University of British Columbia will be speaking on the European Space Agency's Euclid mission which is mapping the dark universe.	

Saturday, Jan. 13: Members' Observing Night at Glenlea

Monthly observing night for members. Come use the Centre's Meade 12" LX200 go-to telescope in the dome or one of the loaner telescopes on the observing pad, or bring your own. If the sky is cloudy, the event will run but will focus on training to use the facility. This month's host: Mark Irvine.

Saturday, Jan. 20: Winter Potluck

Full details here. Open to Centre members and their guests, this informal social potluck will take place starting at 6p.m. at the **Launch Coworking Space (Southside), Suite 200 - 1460 Chevrier Blvd**. Please register what item of food you will contribute using the online Excel form 2024 New Year Potluck Celebration Food List.xlsx.

Sunday, Jan. 28: Planetary Image Processing Workshop

Kicking off the Centre's new workshop program, join Dr. Michelle Boyce for an in-depth dive into how to process planetary images. The event is open to Centre members and will be held at Launch Coworking Exchange, 500-167 Lombard Avenue from 1pm to 4pm.

This is a hands-on participatory workshop, not a passive presentation. Participants require a Windows laptop with the following free software installed:

⇒ PIPP—(https://pipp.software.informer.com/)

⇒ Autostakkert—https://www.autostakkert.com/wp/download/

⇒ Registax—https://www.astronomie.be/registax/download.html

⇒ GIMP—https://www.gimp.org/downloads/

February Centre Events

Monthly Meeting Friday, Feb. 9, 2024	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. (This portion of the meeting is not available online or live-streamed.)

7:00 p.m. Beginner Session - gAIL Wise's Constellation of the Month

7:30 p.m. Main Meeting

- Dennis Lyons, Welcome & Announcements
- Bryan Stach—*"What's Up?"*
- Dr. Danielle Pahud—*"What's New"*
- **Featured Speaker:** Chris Vaughan, host of the RASC's "Insider's Guide to the Galaxy" online astronomy show.

Saturday, Feb. 10: Members' Observing Night at Glenlea

Monthly observing night for members. Come use the Centre's Meade 12" LX200 go-to telescope in the dome or one of the loaner telescopes on the observing pad, or bring your own. If the sky is cloudy, the event will run but will focus on training to use the facility. This month's host is Judy Anderson.

CALL FOR NOMINATIONS—CENTRE COUNCIL

The Centre's Annual General Meeting will be held as part of the March 8, 2024 regular meeting. At this meeting, there will be an election for the open positions, which are the Treasurer, 1 Councilor-at-Large and 4 Councilor-Director positions.

The Treasurer chairs the Finance Committee and manages the Centre's finances and investments, and as a member of the Executive is also a Director of the organization. Councilors serve on the Centre Council and are part of the volunteer group that keeps the Centre running. The duties of a Councilor are to participate in the monthly meetings of Council, provide feedback on matters under discussion, and may take on other duties on behalf of Council or prescribed by the Council.

Any member of the Centre in good standing can let their name stand for election as a Councilor. A Director must be a member in good standing, and also be at least 18 years of age, and not be in bankrupt status (these are legal requirements of the Manitoba Incorporation Act). If you wish to let your name stand for a position, contact Nominating Committee Chair Dennis Lyons at dennis.lyons.3@gmail.com.

Fig. 2—Comet C/2023 A3 (Tsuchinshan-ATLAS) could be a beautiful sight low in the early morning sky in October 2024, if predictions pan out.
Graphic: Stellarium (www.stellarium.org)

(continued from page 1) Canadarm3, which will be part of the Gateway lunar space station… and that Artemis 3 will include a landing on the Moon. Will Jenny be the first Canadian to land on the Moon?

(In truth, Artemis 2 could be pushed into early 2025, the same year that Canadian Josh Kutryk is scheduled to fly on the maiden flight of the Boeing Starliner spacecraft to begin a six-month mission aboard the International Space Station.)

Celestial Sights

It's always hard to rank different events in the sky against each other, but here are some of the other significant sky events we can expect for 2024. This is in addition to the usual "Jupiter will be great for half the year" events and other annual occurences like meteor showers and so on.

Solar Maximum: current predictions indicate the sun's 11-ish-year cycle will peak in 2024. That means lots of sunspots and solar prominences for sun viewers, and likely more solar flares and aurora borealis. Follow sites like spaceweather.com or the Manitoba Aurora and Astronomy Facebook group for detailed predictions.

The night of March 25-26 provides a **penumbral lunar eclipse** for Manitobans. Not the "blood moon" of a total eclipse, you may not even notice a difference in the Moon's appearance except around mid-eclipse.

Saturn's rings will be edge-on to our line of sight in early 2025, and won't be much better in the year 2024. The rings are very thin and so they almost disappear when their plane aligns with our view. The shadow of the rings on the planet will be the most obvious feature for much of the year. It's also a good chance to try to spot or image some of Saturn's fainter inner moons which are often lost in the glare of the bright rings.

Comets

One of the more uncertain types of objects in our sky, a "bright" comet can be a brilliant spectacle to the unaided eye or a faint smudge in binoculars, and we can't always predict which it will be in advance. Here are a few comets to keep an eye on in 2024.

Comet C/2021 S3 (PANSTARRS) could be a nice binocular object in February of 2024, when it climbs up the Milky Way from Scorpius to Aquila in the early morning sky.

Comet 12P Pons-Brooks may reach 5th-magnitude in late March and early April, nicely placed in the evening sky. It passes near the bright galaxy M33 on the spring equinox, and may be visible during the total solar eclipse in April.

The best comet of 2024 may be **C/2023 A3 (Tsuchinshan-ATLAS)**, which could shine very brightly in the early morning sky in late September. Unfortunately, at its brightest this comet will only be visible in the daytime from the northern hemisphere—but even that might not be a deal-breaker, as current brightness estimates are as high as magnitude 0 or even into negative numbers. We'll have to see if this comet lives up to predictions or fizzles.

Of course, a new comet could be discovered at any time, and observatories like the James Webb Space Telescope will pump out discoveries and amazing images faster than most people can keep up, so the true highlights of 2024 might be things we haven't even dreamed of.

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. **Member observing nights** are held once a month (usually on the Saturday after the regular meeting), and members can use the observing pad and warm room any time. Once you've taken the training course you can also book the LX200 dome for your own use. (Booking the observatory can be done by sending an email to the Glenlea booking coordinator at observatory@winnipeg.rasc.ca.)

Telescope Lending Library: The Centre also has a number of portable telescopes that members can borrow on a first-come, first-served basis. The current inventory includes reflectors, refractors, and SCTs of various sizes, as well as some specialized gear such as a Coronado Personal Solar Telescope.

Online Forums: The Centre has a series of Forums on Groups.io, which all paid members are automatically subscribed to so they can receive announcements from the Centre. You can also sign up for other forums depending on your interest - go to Groups.io and sign in with the email address you used to sign up as a member.

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!

What's Up for January 2024

Planetary Highlights

Saturn begins the month low in the southwest as t evening twilight and disappears into the sun's glare before the end of the month. You'll have to catch it early if you want a last look at the rings before it disappears for the season.

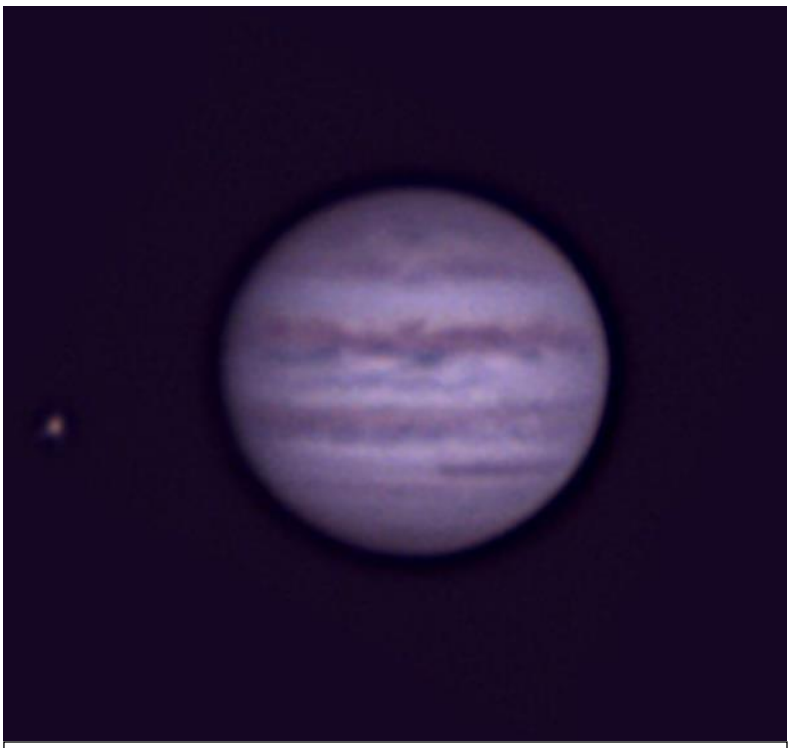
Jupiter still dominates the early evening sky, rising high into the south and allowing for good views and imaging on crisp January nights.

Uranus still shines near Jupiter but requires at least binoculars for most observers to spot it as a faint "star".

Venus is low in the southeast before dawn, remaining in roughly the same spot each morning as its motion and the Earth's motion around the Sun briefly cancel each other. Also see Mercury below.

Mercury is visible low in the southeast for those in southern Canada for the first week of January or so, below and to Venus' left. The crescent Moon joins the scene on January 8, but this grouping occurs very close to the Sun and so will be best seen (in Canada) from the tropical latitudes of southern Ontario. Also see Mars below.

Mars is still too close to the Sun to be easily seen this month. It has a daytime close approach with Mercury on the morning of January 27th which will be a challenging observation, again most likely to be scene from southern Ontario.



Jupiter, imaged through the Centre's 12" LX200 telescope at Glenlea on December 29, 2023. The camera was a ZWO ASI678MC one-shot colour camera, and the best 2% of 10,000 frames taken in a 60-second interval were stacked and processed. The moon Europa is at left.
[Image: Dustin Haertel / Scott Young]

Other Events

The Quadrantid meteor shower was clouded out for most of southern Manitoba but was reported as quite active this year as seen from Calgary.

The waxing gibbous Moon is near Jupiter in the evening sky on January 18th.

What's Up for February 2024

Solar System Highlights

Saturn disappears into the sunset twilight this month - what is the last day you can spot it with the unaided eye? Conjunction occurs on February 28 as the planet passes around the far side of the Sun.

Jupiter is high in the south as darkness falls, setting around local midnight by month's end. Still at a favorable altitude in the early evening, the giant planet is far enough past opposition to make for some interesting views and pairings of the Galilean Moons. Moons passing behind the planet remerge into shadow and don't reappear until some distance from the planet, fading in out of the course of several minutes.

Venus is low in the southeast during morning twilight as February begins, and slowly sinks into the sun's glare throughout February. Venus has a close conjunction with **Mars** on the morning of February 22, but this will be very low and difficult to observe from Canadian latitudes.

Mercury disappears into morning twilight early into the month, and swings around the far side of its orbit this month. Superior conjunction is on February 28, after which the innermost planet heads into its best evening apparition for northern hemisphere observers next month.

Mars slowly emerges from the morning twilight in February, but is still too low and too faint to be easily visible. It passes Venus on the 22nd in a likely-unobservable conjunction.

Comet C/2021 (PANSTARRS) begins the month very low in the pre-dawn sky, but rises higher and brightens as the month goes on. From a dark location, this comet should be barely glimpsed in binoculars and easy in a small to medium-sized telescope. See the chart on page 9.

Comet 12P/Pons-Brooks is near Deneb low in the evening sky after sunset, and moves towards the Great Square of Pegasus by the end of the month. Probably a little faint for binoculars this month, this comet will brighten in March to become an easy binocular target. See chart on page 10.

The Moon passes near the planets and some bright stars as it orbits Earth. Some of the more interesting and observable events include:

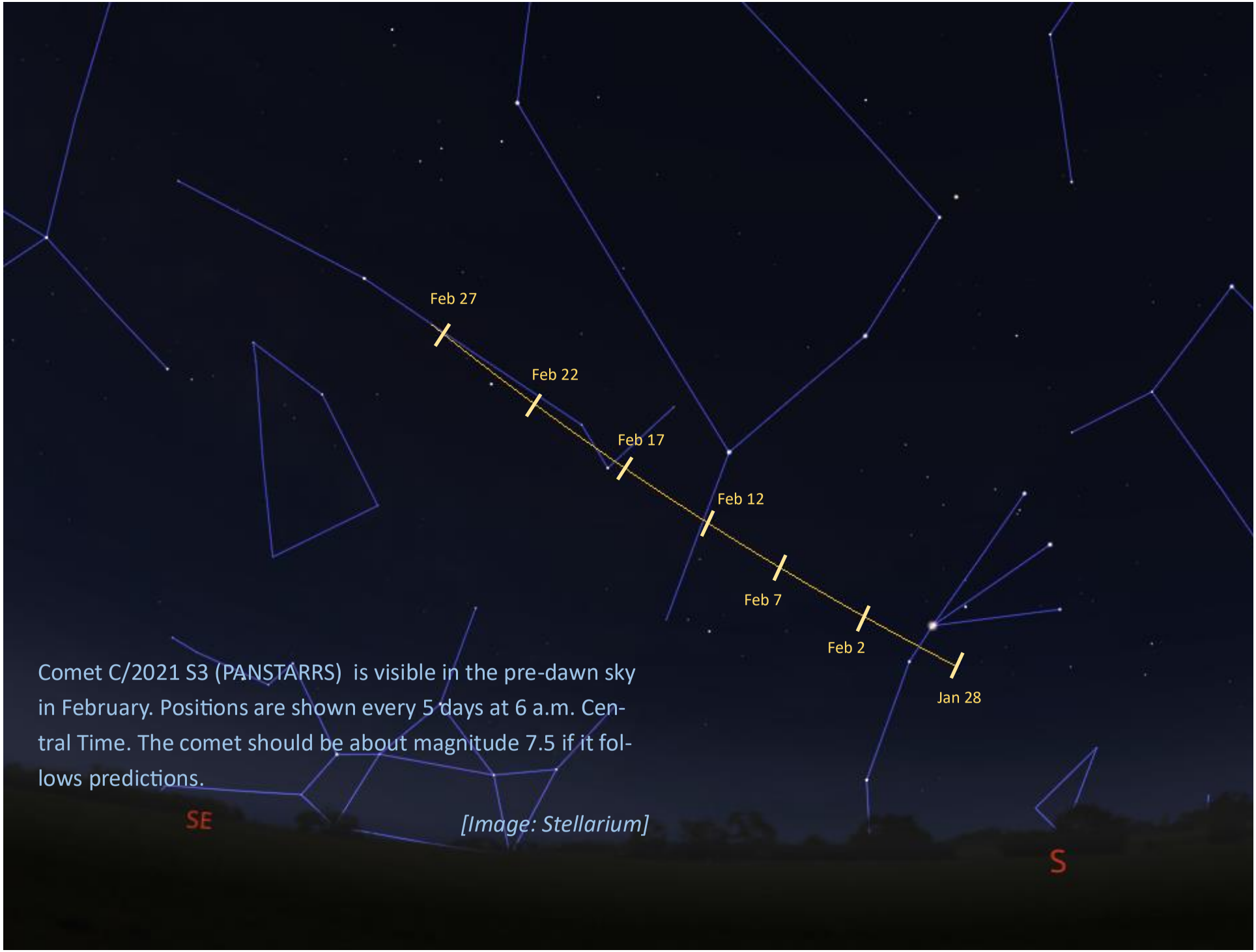
Feb. 7 (morning): The waning crescent Moon is very low below Venus.

Feb. 14 (evening): The waxing crescent Moon is close to Jupiter.

Feb. 16 (evening): The First Quarter Moon is close to the Pleiades star cluster.

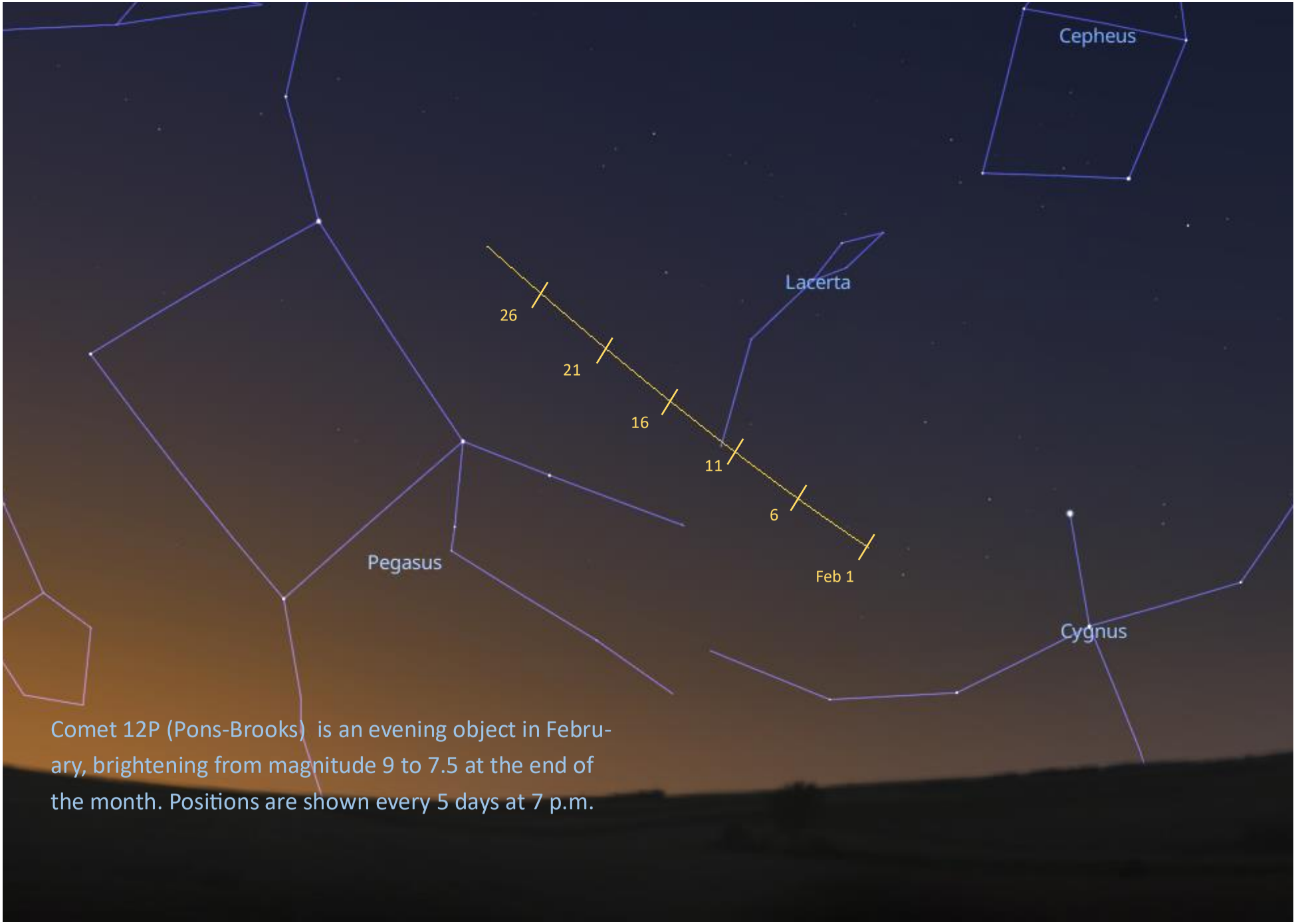
Other Events

Zodiacal Light: Towards the end of February the zodiacal light becomes visible from dark locations. This ghostly cone of light rises into the sky from the horizon along the ecliptic, with its broad end roughly centered on the sunset point on the horizon. The light is the combined glow of myriad dust particles in the plane of our solar system, being backlit at just the right angle to be seen from Earth. See Roy Bishop's excellent article on this dust on p.268 of the 2024 Observer's Handbook.



Comet C/2021 S3 (PANSTARRS) is visible in the pre-dawn sky in February. Positions are shown every 5 days at 6 a.m. Central Time. The comet should be about magnitude 7.5 if it follows predictions.

[Image: Stellarium]



Comet 12P (Pons-Brooks) is an evening object in February, brightening from magnitude 9 to 7.5 at the end of the month. Positions are shown every 5 days at 7 p.m.

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

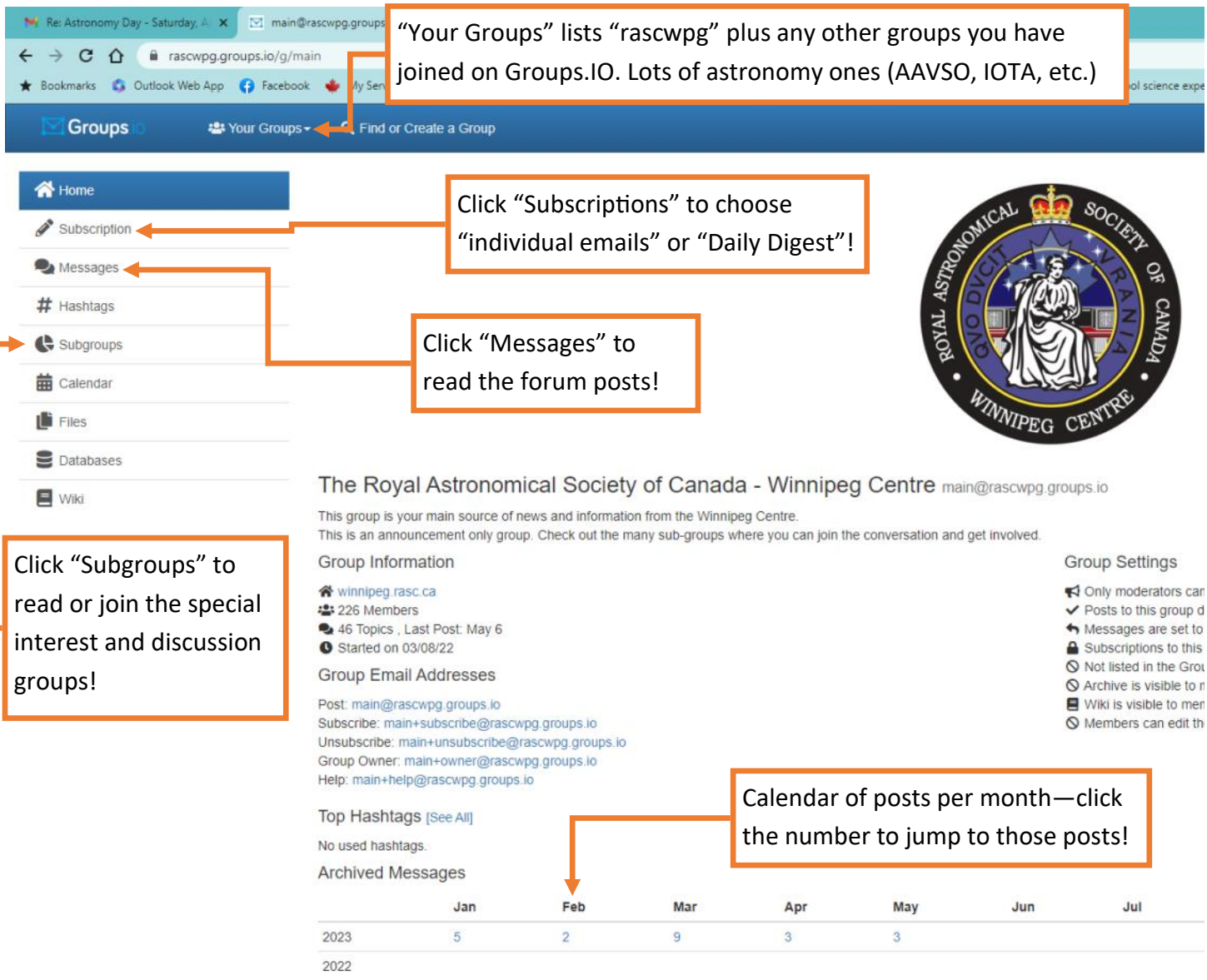
The Centre has moved to the Groups.IO platform for all of its forum and email services. This replaces the in-house forums and the old system of trying to mass-email all 200+ members. It really is a good system, both for the Council and for the users, but it is different and takes a bit of set-up.

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:

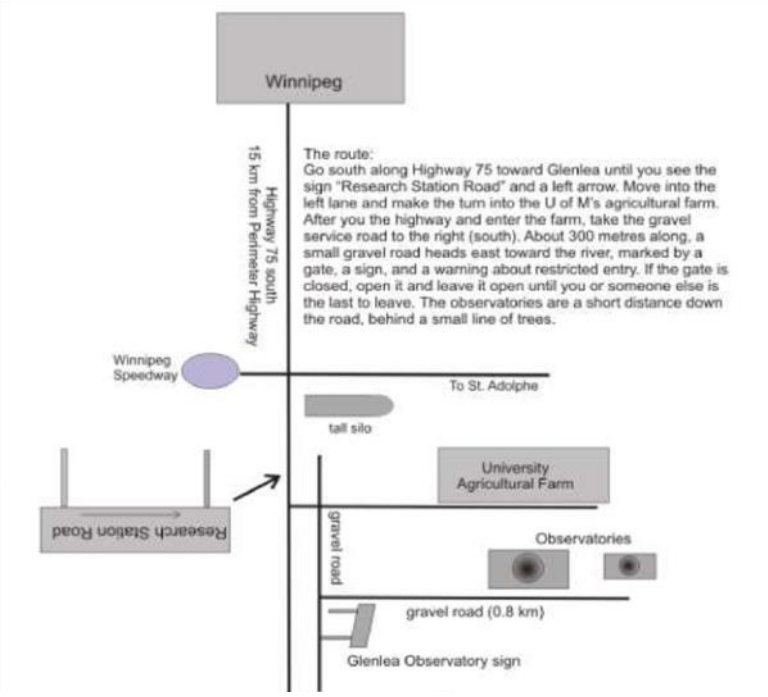
⇒ **if you unsubscribe from the "rascwpg-main" group, you will not receive Centre emails**—this is the only way they are sent out! Please don't do this, or you will not receive important information like noties of meetings, calls for elections, and other important stuff,

⇒ 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.