

Saskatoon Skies

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

Volume 55, Number 02

February 2024



Royal Astronomical Society of Canada
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To view *Saskatoon Skies* digitally, see our website:
<https://saskatoon.rasc.ca/newsletters.html>

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MEMBERSHIP? JOIN TODAY!

Regular: \$111.00 /year

Youth: \$61.10 /year

Family: \$105.50 + \$42.90/additional adult + \$22.20/additional youth

The Saskatoon Centre operates on a one-year revolving membership. You will be a member for the next 12 months no matter when in the year you join. Members are encouraged to renew early to avoid disruption in publications. Renew through the National Office at <http://www.rasc.ca/join>.

Benefits of Membership in the Saskatoon Centre

- knowledgeable & friendly amateur astronomers
- use of the Sleaford Observatory
- use of the U of S Observatory (after training)
- Saskatoon Skies Newsletter
- Observer's Handbook
- Journal of the RASC (electronic format)
- borrow the Centre's projector to give astronomy outreach presentations – contact Les Dickson at astrochem@sasktel.net
- rent the Centre's Telescopes <https://saskatoon.rasc.ca/telescopes.html>
- use of the Centre library
- SkyNews Magazine (bimonthly)

SASKATOON CENTRE'S MAIN OFFICERS:

President – Brent Burlingham

Vice-President – John Takala

Secretary – Lorie Tedford

Treasurer – *vacant* (Les Dickson interim)

National Council Rep – Joelle Sheard-Patrick

Canadian Tire money - Darrell Chatfield

If you cannot attend a meeting but would like to donate your old Canadian Tire money please to assist with club purchases, email Darrell at novachat@sasktel.net.

NEWSLETTER INFO

Newsletter Editor – Colin Chatfield

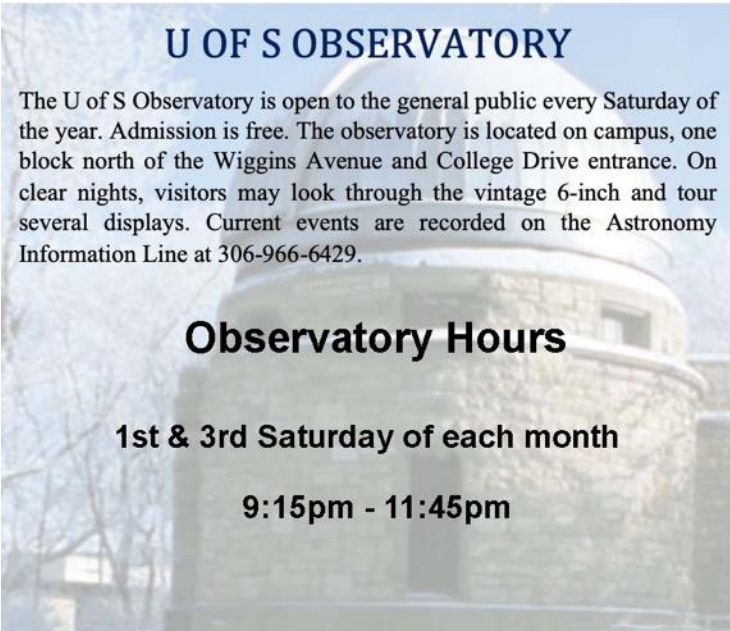
Copy & Collate – Les & Ellen Dickson

Labels & Temps – Mark de Jong

Web Posting/Content Editor – Tenho Tuomi/Andrew Kostiuk

Saskatoon Skies is published monthly by the Saskatoon Centre of the RASC. Distribution is approximately 100 copies per issue. Saskatoon Skies welcomes unsolicited articles, sketches, photographs, cartoons, and other astronomy or space science material. Submissions should be sent by e-mail to the editor at colcha@gmail.com in MS Word or text format. Images (new or old): any format, less than 30MB, sent by e-mail as attached files. Send any articles of interest to the night sky or astronomy. **Deadline for submission of all articles for an upcoming issue is the first Friday of each month!**

Saskatoon Skies is also posted on our Saskatoon Centre homepage as a .pdf file and can be downloaded free-of-charge. Members may choose to receive the newsletter by regular mail or via the Internet. Articles may be reprinted from Saskatoon Skies without expressed permission (unless otherwise indicated), provided that proper source credit is given. Saskatoon Skies accepts commercial advertising. Please email the editor at colcha@gmail.com for rates. Members can advertise non-commercial items for free.

A poster for the University of Saskatchewan Observatory. The background is a faded image of the observatory building. The text is centered and reads: "U OF S OBSERVATORY", "The U of S Observatory is open to the general public every Saturday of the year. Admission is free. The observatory is located on campus, one block north of the Wiggins Avenue and College Drive entrance. On clear nights, visitors may look through the vintage 6-inch and tour several displays. Current events are recorded on the Astronomy Information Line at 306-966-6429.", "Observatory Hours", "1st & 3rd Saturday of each month", "9:15pm - 11:45pm".

U OF S OBSERVATORY

The U of S Observatory is open to the general public every Saturday of the year. Admission is free. The observatory is located on campus, one block north of the Wiggins Avenue and College Drive entrance. On clear nights, visitors may look through the vintage 6-inch and tour several displays. Current events are recorded on the Astronomy Information Line at 306-966-6429.

Observatory Hours

1st & 3rd Saturday of each month

9:15pm - 11:45pm

Hours subject to change, so check below for more info -

Website - <https://artsandscience.usask.ca/physics/facilities/observatory.php>

Facebook - <https://www.facebook.com/usaskobservatory/>

RASC CALENDAR OF EVENTS & MEETING INFO

Feb 10	Observer's Group - Sleaford Observatory	
Feb 12	RASC Saskatoon Centre General Meeting	Brent Burlingham

Observer's group viewing starts at dusk at the Sleaford Observatory dark site. Get there early and set up for a great night of observing! Members and their guests only

For a complete list of club events, please visit: <https://saskatoon.rasc.ca/activities.html>

February RASC General Meeting

for all members and guests

Join us on February 12th, 2024 at 8:00PM (Executive meeting at 7:00pm)
Webinar (info below)

***Please note:** the meeting will be at the U of S Observatory at 108 Wiggins Ave (on the U of S Campus)*

7:00pm - **RASC Executive Meeting** (Members may attend the executive meeting as observers if they wish)

A Zoom registration link and phone-in numbers will be emailed to Members.

After that, the procedure to register and join the meeting is the same as for the webinar (explained below).

NOTE: links to register to attend the webinar will be emailed out as well so we know who is planning to attend. After registering, an email invitation will be sent with a link to join via computer or a number to phone in. When joining via computer, participants will have to first download and install the Zoom app, if they have not done so already.

8:15pm - **Main Program -**

"What's Up This Month?" – Colin Chatfield

"The 25th Anniversary of the RASC Dark Site Program" - Peter Brackett (RASC Calgary Centre)

More info below

MEETING MAIN PROGRAM INFO

Peter Brackett will be presenting information about Royal Astronomical Society of Canada's (RASC) Light Pollution Abatement Committee's (LPAC) Dark Sky Site's history and development.

Peter is an Electrical Engineer who joined long term LPAC Chair Bob King and member Roland Dechesne and many others on the Light Pollution Abatement Committee at the 2018 Calgary RASC Annual Meeting and has supported work on the Dark Sky program since that time.

His presentation will focus on the purpose and designations of the Dark Sky sites, their developments across Canada, and the future plans and the significance of the 25th year celebration.

COMET NOTES

Tenho Tuomi

In 2023, I photographed 17 comets; 13 that were new to me and 4 periodic comets that I had photographed before on previous orbits. The brightest comet of the year was C/2022 E3 (ZTF) which was magnitude 5 at the end of January last year. The brightest comet forecast for 2024 is C/2023 A3 (Tsuchinshan-ATLAS) which might be magnitude -1 in the morning sky at the beginning of October.



California Nebula taken October 14th with a modified Canon T3i though a 12" Newtonian. Photo by Tenho Tuomi

BOOKS AND EQUIPMENT FOR SALE

All books are in either new, or like new condition. Retail price in brackets. Please email at novachat@sasktel.net or text/call 306-222-0515 if you want a particular book to make arrangements. All books being sold by Darrell Chatfield.

“Deep-Sky Observers Handbook”	Volume 1-5	Enslow-Lutterworth	\$40.00
“International Encyclopedia of Astronomy”	1987	Patrick Moore	Color \$10.00
“Backyard Astronomers Guide”	T. Dickinson & Alan Dyer	2008	Color \$25.00
“Atlas of Deep Sky Splendors”	1978	H. Verhenberg	(50.00) B & W \$22.00
“Amateur Astronomers Catalog of 500 Deep Sky Objects”	Vol 1	1980	B & W \$15.00
R. Morales			
“Observing the Constellations”	1989	J. Sanford	Color charts \$10.00

***NOTE: “I will be advertising the astronomy equipment and accessories from the Melby Estate in the next few newsletters. I will also bring a selection of eyepieces, etc. to the next few meetings for your perusal. Some items were never used. All monies go to the Estate. Thank you.”* Darrell Chatfield**

FOR SALE FROM THE MELBY ESTATE - A PARTIAL LISTING

I will bring the 7x50 and Skymasters to the meeting. Please email me if you want to see any other set. novachat@sasktel.net

Thank you. Darrell

Bushnell binos - 20x80 - Built in tripod holder , Hard case, Brand new - \$90.00

Essential Optics binos - 11x80 - Hard case, Lightly used - \$75.00

Marksman binos - 7x50 - no eyecups, Hard case, Lightly used - \$25.00

Celestron Skymaster binos - 15x70 - Soft case, Like new - \$45.00

Star Trak binos - 11x80 - Hard case, Brand new, Has a tripod mount and strap - \$85.00

Celestron Sky Scout personal planetarium - Brand new - \$85.00



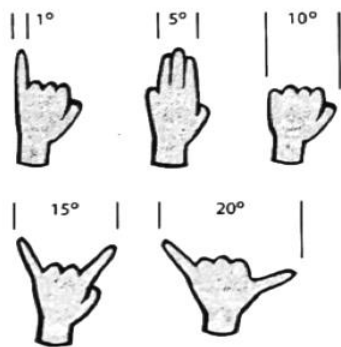
Photo from the club's Mano's Christmas supper

FEBRUARY NIGHT SKY EVENTS AND INFO

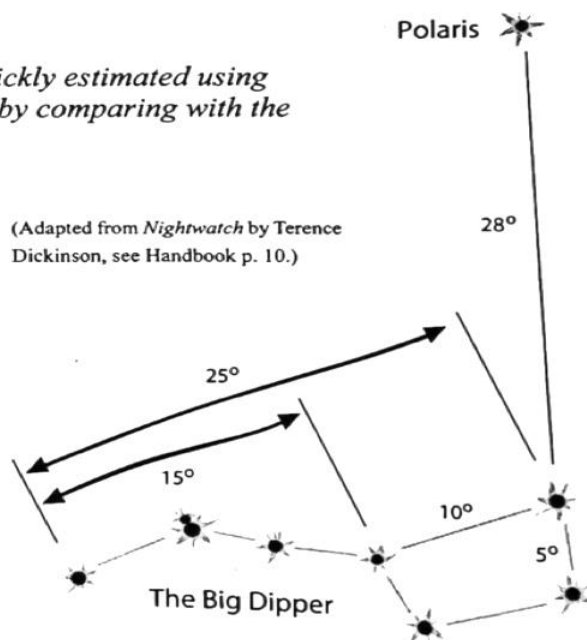
Images on the next few pages taken, with permission, from the 2024 Observer's Handbook. It can be obtained by joining the RASC here <http://rasc.ca/join> or ordered from <https://secure.rasc.ca/store/product/observer-s-handbook-2024>

HANDY SKY MEASURES



















Angular measure in the sky can be quickly estimated using the fingers of an outstretched arm, or by comparing with the star separations in the Big Dipper.



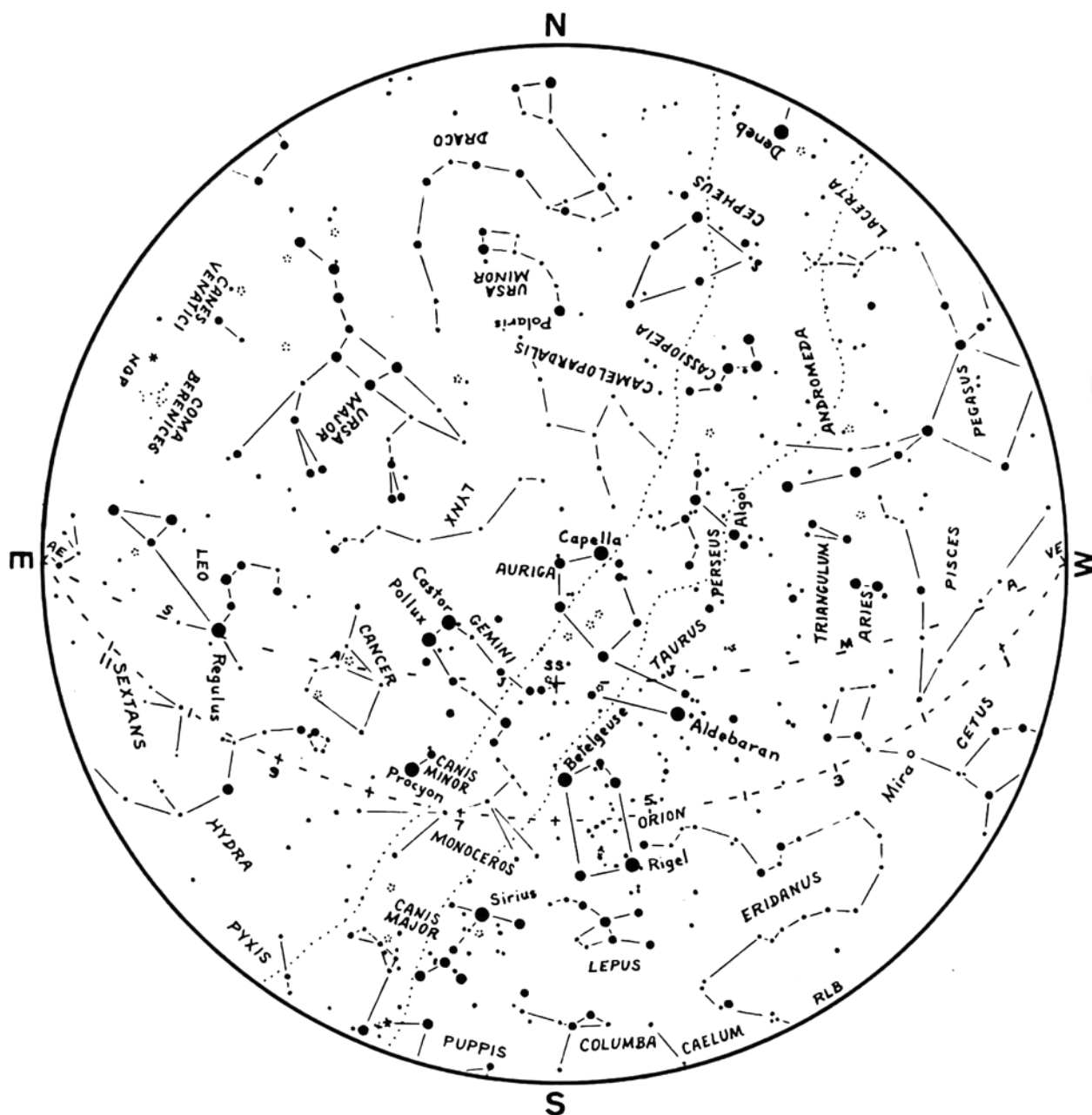
(Adapted from *Nightwatch* by Terence Dickinson, see Handbook p. 10.)



RASC OBSERVER'S HANDBOOK 2024 – STANDARD EDITION

Time (UT)			FEBRUARY EVENTS		Jupiter's Satellites	
	d	h m			West	East
Thu.	1	8 20 15	Spica 1.7° S of Moon Algol at minimum		1.0	Europa
Fri.	2	23 18	Mercury at aphelion last quarter		2.0	
Sat.	3				3.0	Io
Sun.	4	17 04	Algol at minimum		4.0	
Mon.	5	1	Antares 0.6° S of Moon, occultation†		5.0	Ganymede Callisto
Tue.	6				6.0	
Wed.	7	13 53	Algol at minimum		7.0	
		19	Venus 5° N of Moon		8.0	
Thu.	8	7 18	Mars 4° N of Moon		9.0	
		22	Vesta stationary		10.0	
Fri.	9	22 59	Mercury 3° N of Moon new Moon (lunation 1251)		11.0	
Sat.	10	10 43	Algol at minimum		12.0	
		19	Moon at perigee (358 088 km) Large tides		13.0	
Sun.	11	1	Saturn 1.8° N of Moon		14.0	
Mon.	12	7	Neptune 0.7° N of Moon, occultation‡		15.0	
Tue.	13		Venus at descending node		16.0	
		7 32	Algol at minimum		17.0	
		17 01	Moon at ascending node		18.0	
Wed.	14				19.0	
Thu.	15	8	Jupiter 3° S of Moon		20.0	
Fri.	16	2	Uranus 3° S of Moon		21.0	
		4 21	Algol at minimum		22.0	
		15 01	first quarter		23.0	
		20	Moon 0.6° S of Pleiades (M45)		24.0	
Sat.	17				25.0	
Sun.	18				26.0	
Mon.	19	1 11	Algol at minimum		27.0	
Tue.	20				28.0	
Wed.	21	2	Pollux 1.6° N of Moon		29.0	
		22 00	Algol at minimum		30.0	
Thu.	22		Mercury at greatest heliocentric lat. S		31.0	
		16	Venus 0.6° N of Mars			
Fri.	23					
Sat.	24	12 30	full Moon (smallest in 2024)			
		18 49	Algol at minimum			
Sun.	25	15	Moon at apogee (406 312 km)			
Mon.	26		Zodiacal light vis. in N lat. in W after evening twilight for next two weeks			
Tue.	27	15 38	Algol at minimum			
		22 53	Moon at descending node			
Wed.	28	9	Mercury in superior conjunction			
		14	Spica 1.5° S of Moon			
Thu.	29	21	Saturn in conjunction with the Sun			

†Parts of Middle East, India, Africa, Europe, Asia, Australia, Oceania, Philippines



REIMBURSEMENT FOR CENTRE EXPENSES

The Centre has a reimbursement procedure on submission of expense claims. A writeable pdf claim form can be found on the Centre webpage under the Executive tab. The expense form **must** be submitted *along with original receipts* to the Treasurer within 30 days of the transaction. All expenditures must be preapproved by the Executive or be within allocated budgets.

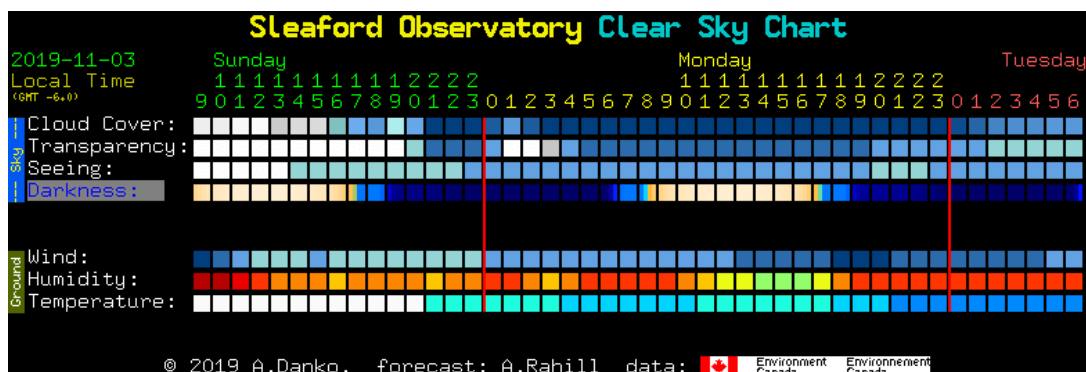
Please contact the Treasurer with any inquiries.

CLEAR SKY AND WEATHER INFO

To find clear skies, visit the Clear Dark Sky website -

<https://www.cleardarksky.com/csk/>

Once there, one can enter your location to find clear skies. The chart will appear as follows:



Environment Canada provides weather information for astronomy -

www.weather.gc.ca/astro



Saskatchewan Light Pollution Abatement Committee -

<http://myotherlife.net/slpac/>



www.darksky.org

MINUTES OF JANUARY MEETINGS

Brent Burlingham

Minutes of the Monthly Executive Meeting of the RASC Saskatoon Center Monday, Jan 15, 2024 - 7:00 pm Hybrid: In-person U of S Observatory and Online

Attending: Brent Burlingham, Lorie Tedford, Les Dickson, Yannis Pahatouroglou, Joelle Sheard-Patrick, Colin Chatfield, Darrell Chatfield

1. **Call to order** 7:00 pm – Brent Burlingham (President and Chair)
2. **Approval of the Executive meeting minutes for November 2023** as printed in the December newsletter. Moved by Joelle Sheard-Patrick, seconded by Les Dickson; carried.
3. **Call for additional announcements/items to add to the agenda.**
4. **Announcements from the Chair** – Brent Burlingham
Welcomed the members to the Observatory with special thank you to the U. of S for hosting.
5. **Old Business - Reports from the Executive Council**
 - 5.1. **President's Report** – Brent Burlingham.
Brent recognized the letters of resignation from outgoing Directors (Tenho Tuomi, James Wood, Les Dickson) and welcomed new Directors (Yannis Pahatouroglou, George Charpentier and Mark De Jong). Discussed the December social dinner at Mano's and thanked those who were able to attend.
 - 5.2. **Acting Treasurer** – Les Dickson.
Les reviewed his progress of completing the financial report for national.
 - 5.3. **National Council Rep** – Joelle Sheard-Patrick
National has reported that there is an upward trend in membership. For the upcoming year, there was discussion on donation campaigns, the switch to hybrid meetings, and financial reports last year's budget. There will also be an Eclipse Meeting on Wednesday, January 17th to discuss the creation of an Eclipse Task Force and eclipse t-shirts that will be available. There was also the discussion regarding the Observer Handbook being available online versus mailing out copies.

5.4. Bylaws Committee – Les Dickson

Les reviewed his progress of updating the by-laws. There was a discussion of adding in a “permission to be contacted” by law that would give members an option to opt out of being contacted and email notifications.

5.5. SSSP 2023 Update – Les Dickson

The year 2023 saw more expenditures and issuing refunds but with that being said the SSSP was able to make a payment back the centre from profits made for SSSP 2023.

5.6. Sleaford Update – Darrell Chatfield

Yannis was added as a new key member. Motion made by Darrell to charge a \$25 non-refundable fee for key holders to cover cost of keys, seconded by Les Dickson; carried. Discussed rekeying every few years and updating the list of key holders who have access to Sleaford.

6. New Business

6.1. Observer Group Announcements – Brent Burlingham.

Discussed updating the observer group email list as there are more on the list than there are members. The list will be replaced with the current member list.

6.2. Public Outreach - Darryl Jensen was asked if the center could provide astronomy equipment for an event on February 23rd.

6.3. Future Meetings – Brent Burlingham.

Next executive meeting there will be a discussion about decoupling executive meetings from member meetings and reducing the frequency of executive meetings.

6.4. Discussion about Meade 16” Telescope at Sleaford

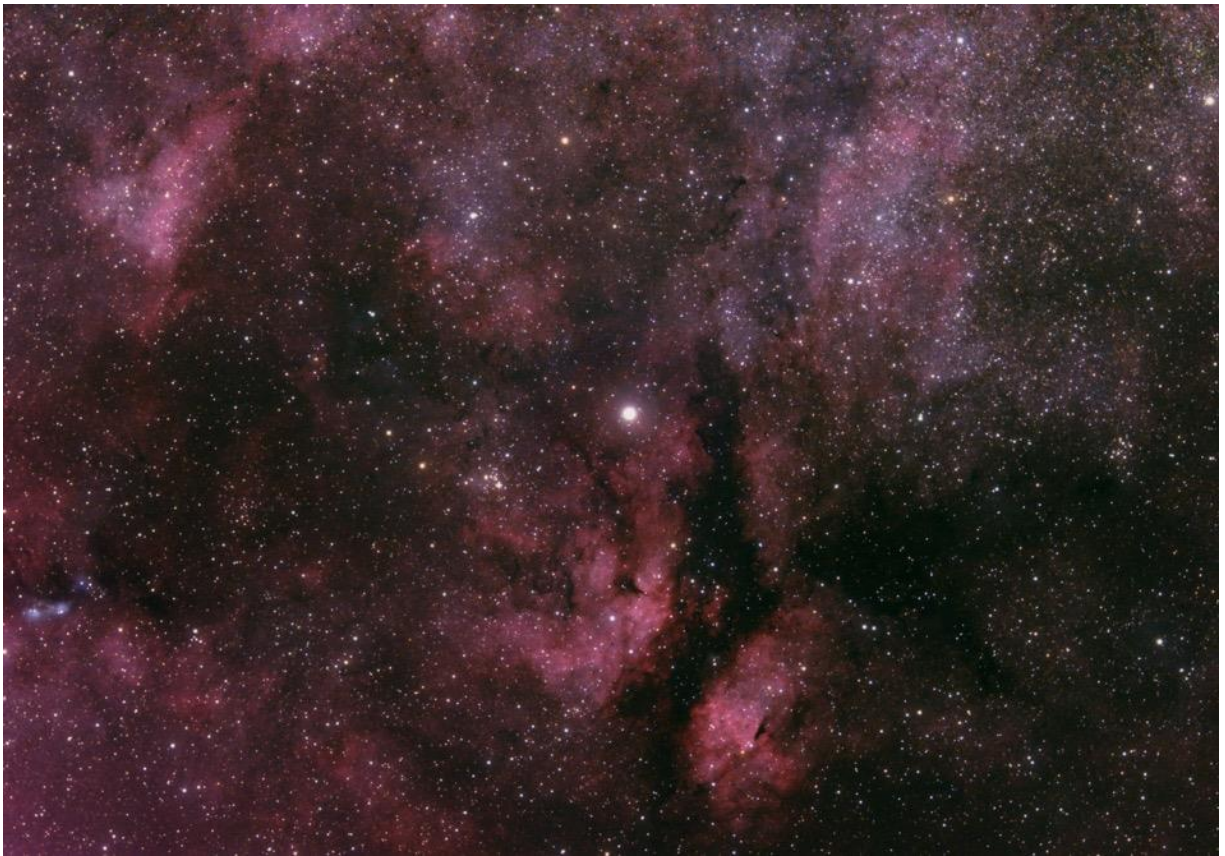
Brent has ordered a power supply for the scope. Yannis will have a discussion with Darrell to see if there are uses for the scope.

7. Motion to adjourn moved by Les Dickson, seconded by Joelle Sheard-Patrick; carried. 8:00 PM.

**Minutes of the Monthly General Meeting of the RASC Saskatoon Center
Monday, Jan 15, 2024 - 7:00 pm Hybrid: In person U of S Observatory and Online**

Minutes taken and prepared by Lorie Tedford.

- 1. Sharing/Networking Time** - 8:00-8:15 pm – all members.
- 2. Call to Order** – 8:24 pm – Brent Burlingham (President and Chair)
- 3. Call for additional announcements/items to add to the agenda**
- 4. Call out to new members/guests:** Lisa Codwell
- 5. Adoption of the November General meeting minutes** as printed in the December newsletter. Moved by Joelle Sheard-Patrick, seconded by Les Dickson; carried.
- 6. Executive Meeting Summary** – Brent Burlingham
 - Recognition of the resignation of outgoing Directors (Tenho Tuomi, James Wood, Les Dickson) and welcome new Directors (Yannis Pahatouroglou, George Charpentier and Mark De Jong).
 - Les is currently trying to put together the financial report for National.
 - National Council has reported an upward trend in membership, the upcoming eclipse and the corresponding events (see executive minutes), the Observer's handbook will be available online compared to printed copies for all members.
 - New key member, Yannis, was added for Sleaford.
 - A new \$25 non-refundable fee vote for key members was carried. Rekeying will be required every few years.
 - Brent discussed finding a power supply for the Meade 16" telescope at Sleaford. Yannis and Darrell will discuss a use for the scope.
- 7. New Business** – no items brought forward to discuss.
- 8. Program**
 - 8.1.** The Upcoming Sky presented by Colin Chatfield
 - 8.2.** Celestron Polar Scope Improvements, Celestron StarSense Auto-Align presented by Brent Burlingham
- 9. Call to adjourn** – Moved by Les Dickson, seconded by Joelle Sheard-Patrick; carried. 9:05 pm.



Butterfly Nebula taken by Lorie Tedford

OBSERVING CERTIFICATES AND CLUBS

RASC OBSERVING PROGRAMS AND CERTIFICATES

The RASC offers four observing certificates for **members** who observe all objects in each of the following observing lists in this chapter:

- THE MESSIER CATALOGUE (p. 312)
- THE FINEST NGC OBJECTS (p. 316),
- THE DEEP-SKY CHALLENGE OBJECTS (p. 320),
- DEEP-SKY GEMS (p. 322).

See rasc.ca/certificate-programs for details and contact the RASC Observing Committee Chair at rasc.ca/contact/observing for further information.



The RASC also offers the **Explore the Universe Certificate** for novice observers (who do not have to be RASC members), the **Explore the Moon Certificate** for beginning members, and the **Isabel Williamson Lunar Observing Certificate** and the **Double Stars Observing Certificate** for intermediate to advanced members. In addition, **Astroimaging certificates** are available for those members with a photographic bent. See rasc.ca/astro-imaging-certificate

Join the Club! Observe all 110 Messier, 110 Finest NGC, 400 Herschel I or II, 140 Lunar, 154 Sky Gems or 35 Binocular objects, or Explore the Universe and earn great OBSERVING CERTIFICATES!

MESSIER CLUB

Certified at 110 Objects:

*R. Huziak, G. Sarty,
S. Alexander, S. Ferguson,
D. Chatfield, T. Tuomi, L.
Scott, G. Charpentier, B.
Johnson, L. Dickson,
B. Burlingham, Norma Jensen,
Donna-Lee May*

Ron Waldron	108
Brent Gratias	104
Marcel Müller-Goldkuhle	94
Wade Selvig	75
Wayne Schlapkohl	43
Ellen Dickson	34
Graham Hartridge	9

CHATFIELD BINOCULAR CERTIFICATE

Certified at 35 to 40 Objects:

T. Tuomi, R. Huziak

Jim Goodridge	12
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FINEST NGC CLUB

Certified at 110 Objects:

*R. Huziak, G. Sarty,
D. Chatfield, T. Tuomi*

Larry Scott	110
Scott Alexander	97
Norma Jensen	83
Sandy Ferguson	23
George Charpentier	13
Brent Burlingham	97

EXPLORE THE UNIVERSE

Certified at 55 to 110

Objects: *T. Tuomi, B. Gratias*

Wayne Schlapkohl	55
Jim Goodridge	35

ISABEL WILLIAMSON

LUNAR OBSERVING CERTIFICATE

Certified at 140 Objects:

T. Tuomi, N. Jensen

EXPLORE THE MOON CERTIFICATE

T. Yaworski

Brent Gratias	37
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HERSCHEL 400 CLUB

Certified at 400 Objects:

*R. Huziak, D. Chatfield,
T. Tuomi*

Gordon Sarty	251
Scott Alexander	117
Larry Scott	45
Sandy Ferguson	18

HERSCHEL 400-II CLUB

Darrell Chatfield	400
Tenho Tuomi	378
Rick Huziak	246

LEVY DEEP-SKY GEMS

Certified at 154 Objects:

Tenho Tuomi	150
Darrell Chatfield	70

Messier, Finest NGC, and David Levy's Deep-Sky lists in the *Observer's Handbook*.

The Explore the Universe list is available here <http://www.rasc.ca/explore-universe>
Messier and Finest NGC lists, charts and logbooks: <https://www.rasc.ca/certificate-programs>

Herschel 400 List: <http://www.astroloague.org/al/obsclubs/herschel/hers400.html>

Chatfield Binocular List is at: https://saskatoon.rasc.ca/Chatfield_Binocular_List.pdf

"Isabel Williamson Lunar Observing Program Guide" program details can be found at:

<https://www.rasc.ca/isabel-williamson-lunar-observing-program>