

# Saskatoon Skies

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

Volume 55, Number 11

December 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
- borrow the Centre's projector to give astronomy outreach presentations - contact Les Dickson at [astrochem@sasktel.net](mailto:astrochem@sasktel.net)
- rent the Centre's Telescopes <https://saskatoon.rasc.ca/telescopes.html>
- use of the Centre library
- Journal of the RASC (electronic format)

## SASKATOON CENTRE'S MAIN OFFICERS:

**President** - Brent Burlingham

**Vice-President** - John Takala

**Secretary** - Lorie Tedford

**Treasurer** - Les Dickson

**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](mailto:novachat@sasktel.net).

# NEWSLETTER & U OF S OBSERVATORY INFO

**Newsletter Editor** - Colin Chatfield

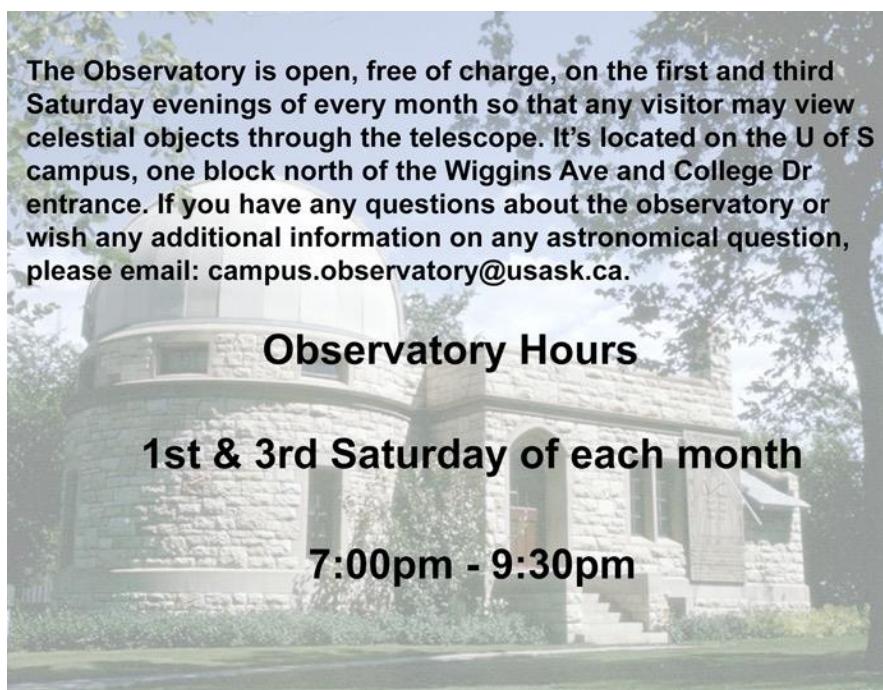
**Copy & Collate** - Les & Ellen Dickson

**Labels & Temps** - Mark de Jong

**Web Posting/Content Editor** - Tenho Tuomi/Andrew Kostiuk/Brent Burlingham

Saskatoon Skies is published monthly by the Saskatoon Centre of the RASC. Distribution is approximately 80 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](mailto: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](mailto:colcha@gmail.com) for rates. Members can advertise non-commercial items for free.



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

<b>Dec 28</b>	<b>Observer's Group - Sleaford Observatory</b>	Brent Burlingham
<b>Jan 20</b>	<b>RASC Saskatoon Centre General Meeting</b>	Brent Burlingham
<b>Jan 25</b>	<b>Observer's Group - Sleaford Observatory</b>	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>

## January RASC General Meeting for all members and guests

**Join us on January 20th, 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

**TBA**

## 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](mailto: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.

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

Please email me if you want to see any items - [novachat@sasktel.net](mailto:novachat@sasktel.net). Darrell Chatfield

- 2 - **1.25" rack and pinion focusers** for refractor type telescopes. Brand new. Never used. Inset diameter is 57mm. Heavy duty type with metal knurled knobs. All have boxes. \$20.00 each.

- **Original Celestron orange tube C5" scope** with tangent arm. Fork arms. SCOPE ONLY. **No tripod or wedge**. 5 x 30 finder, 1.25" visual back, diagonal, eyepiece, lens cap, metal case. Was used as a spotter scope. Not a mark on the tube. Clean looking. \$250.00

1	1.25" eyepiece extender - 3" long	\$20.00
1	1.25" Celestron off axis guider c/w 12.5mm ep. Can be illuminated. New.	\$45.00
1	Celestron 1.25" reticle. Can be illuminated	\$20.00
1	3.5" long 1.25" tele-extender	\$20.00
3	1.25" visual backs new	\$10.00 each
1	1.25" to 0.965" visual back	\$10.00
1	Camera to visual back adapter	Lightly used \$10.00
1	Threaded visual back to 16mm male threads camera adapter	\$10.00

## PRINTED NEWSLETTERS

\*Please note that after the December 2024 newsletter is sent out, printed newsletters will not be mailed any longer.\*



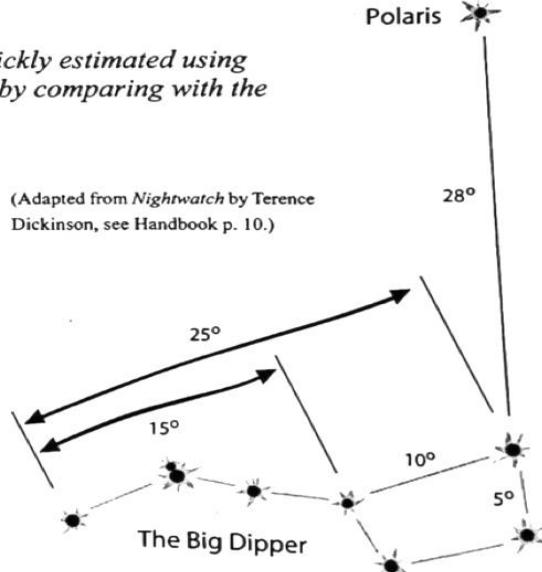
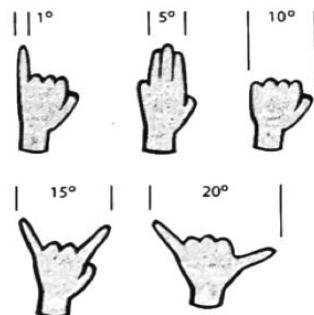
*Full field Orion Nebula. Imaged at Sleaford Observatory Friday, November 1st, 2024. 5 hours total, 300 second exposures. RedCat 51x250mm, ASI 2600 Duo colour camera, Optolong L-quad enhance filter, ZWO AM3 harmonic drive mount. Processed in Siril. Photo by Nick Larsen.  
\*Cropped from the original to fit properly.\**

## DECEMBER NIGHT SKY EVENTS AND INFO

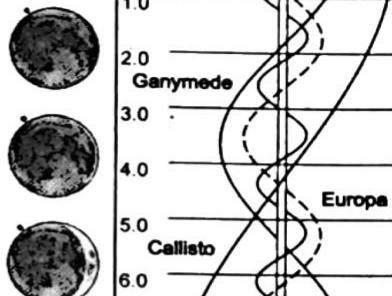
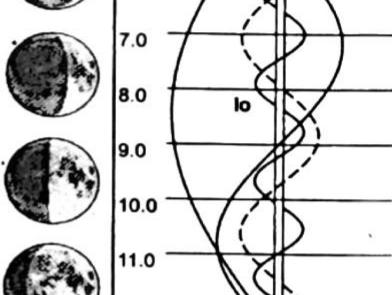
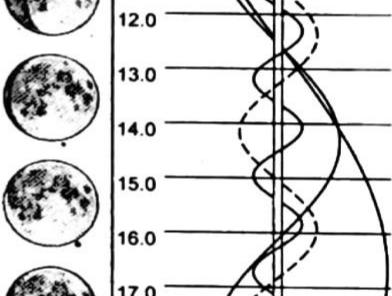
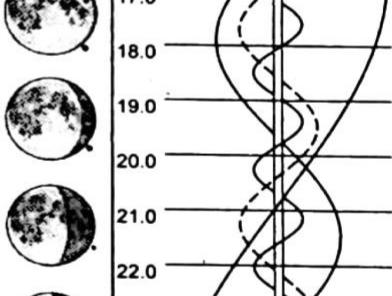
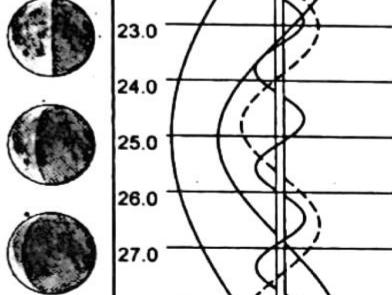
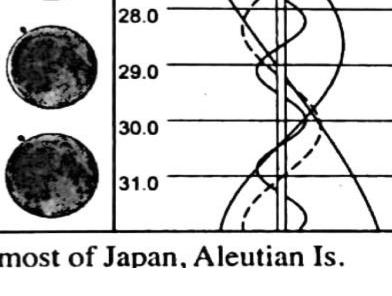
Images on the next few pages taken, with permission, from the 2024 Observer's Handbook. It can be obtained by joining the RASC here <http://rasc.ca/join> or ordered from <https://secure.rasc.ca/store/product/observer-s-handbook-2024>



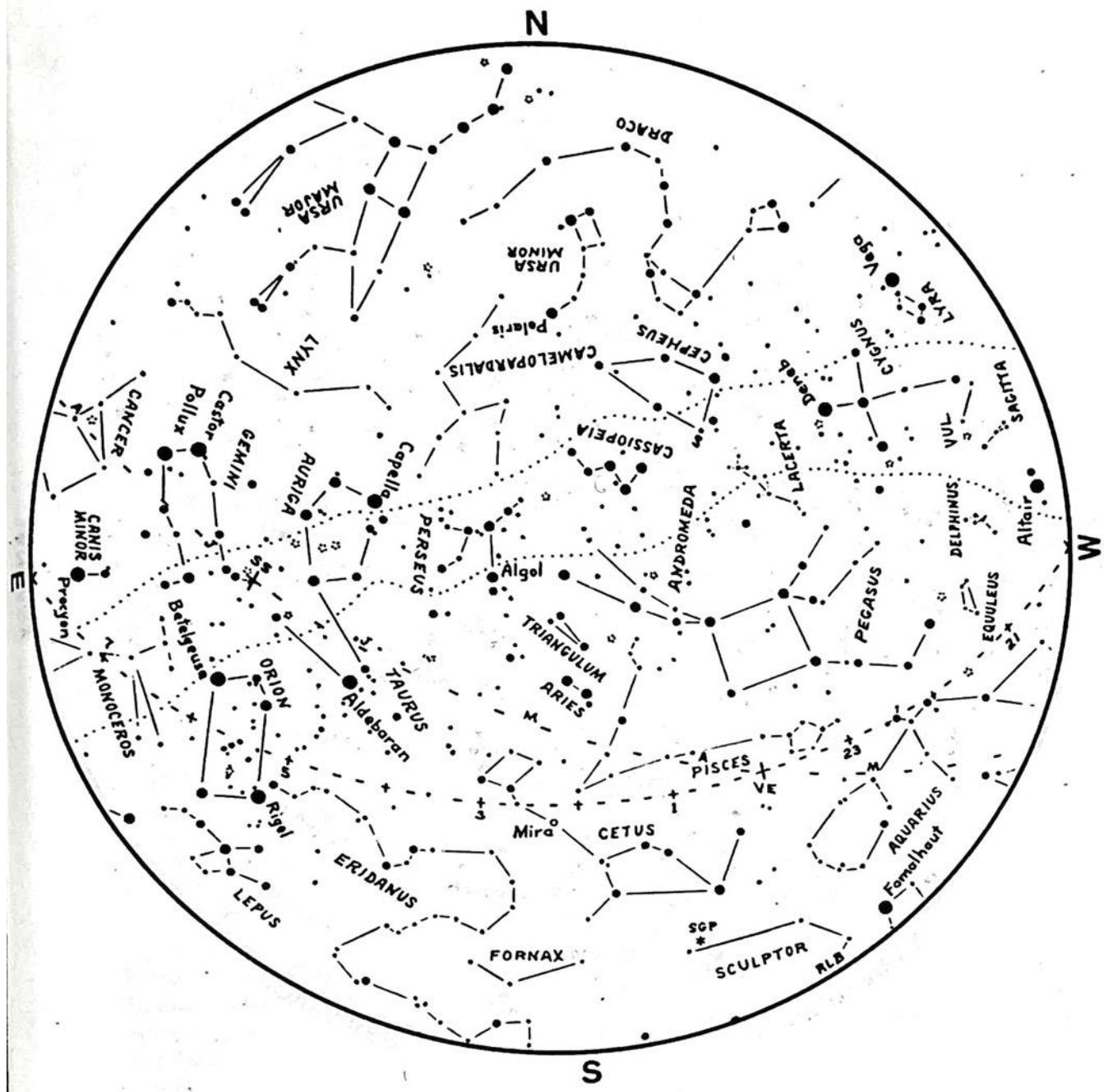
### HANDY SKY MEASURES



RASC OBSERVER'S HANDBOOK 2024 – STANDARD EDITION

Time (UT) d h m			DECEMBER EVENTS	Jupiter's Satellites West East
Sun. 1	6 21		Mercury at ascending node	
	18 37		<b>new Moon (lunation 1261)</b>	
			Algol at minimum	
Mon. 2				
Tue. 3				
Wed. 4	15 26		Algol at minimum	
	23		<b>Venus 2° N of Moon</b>	
Thu. 5				
Fri. 6	2		Mercury at perihelion	
			Mercury in inferior conjunction	
Sat. 7	12 15		Algol at minimum	
	21		<b>Jupiter at opposition</b>	
	21		Mars stationary	
Sun. 8	9		<b>Saturn 0.3° S of Moon, occultation†</b>	
	11		Neptune stationary	
	15 27		<b>first quarter</b>	
Mon. 9	9		<b>Neptune 0.8° S of Moon, occultation‡</b>	
	19 36		Moon at ascending node	
Tue. 10	9 04		Algol at minimum	
Wed. 11				
Thu. 12	13		Moon at perigee (365 361 km)	
Fri. 13	5 54		Algol at minimum	
	10		Uranus 4° S of Moon	
	18		Moon in Pleiades (M45)	
Sat. 14	1		Geminid meteors peak	
	20		Jupiter 5° S of Moon	
Sun. 15	9 02		<b>full Moon</b>	
	21		Mercury stationary	
Mon. 16	2 43		Mercury at greatest heliocentric lat. N	
			Algol at minimum	
Tue. 17				
Wed. 18	9		<b>Mars 0.9° S of Moon, occultation*</b>	
	23 32		Algol at minimum	
Thu. 19				
Fri. 20				
Sat. 21	9 21		<b>Solstice</b>	
	20 21		Algol at minimum	
Sun. 22	10		Ursid meteors peak	
	22 18		<b>last quarter</b>	
	23 21		Moon at descending node	
Mon. 23	7 47		<b>Double Shadows on Jupiter</b>	
Tue. 24	7		Moon at apogee (404 485 km)	
	17 10		Algol at minimum	
	20		<b>Spica 0.2° S of Moon, occultation§</b>	
Wed. 25	3		<b>Mercury greatest elongation W (22°)</b>	
Thu. 26				
Fri. 27	13 59		Algol at minimum	
Sat. 28	15		<b>Antares 0.09° N of Moon, occultation††</b>	
Sun. 29				
Mon. 30	10 37		<b>Double Shadows on Jupiter</b>	
	10 49		Algol at minimum	
	22 27		<b>new Moon (lunation 1262)</b>	
Tue. 31				

†Indonesia, Philippines, NW edge of Australia, NW Micronesia, most of Japan, Aleutian Is.



## 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.

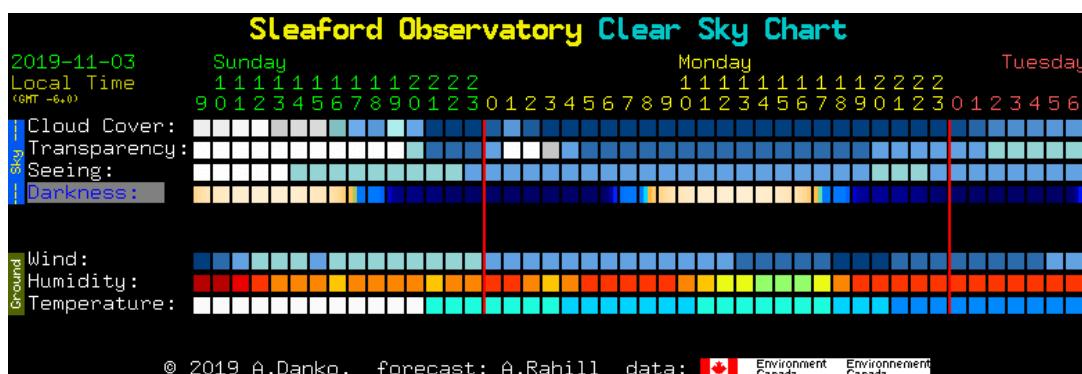
Please contact the Treasurer with any inquiries.

# 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](http://www.weather.gc.ca/astro)



Saskatchewan Light Pollution Abatement Committee -

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



[www.darksky.org](http://www.darksky.org)

# MINUTES OF NOVEMBER MEETINGS

Lorie Tedford

**Minutes of the Monthly Executive Meeting of the RASC Saskatoon Centre  
Monday, Nov 18th, 2024 - 7:00 pm Hybrid: Online & In-person: U of S Observatory**

**Attending:** Brent Burlingham, Lorie Tedford, Les Dickson, Joelle Sheard-Patrick, Colin Chatfield, Darrell Chatfield, George Charpentier

- 1. Call to order** 7:04 pm - Brent Burlingham (President and Chair)
- 2. Approval of the Executive meeting minutes for October 2024** as printed in the October newsletter. Moved by Les Dickson, seconded by Darrell Chatfield; carried.
- 3. Call for additional announcements/items to add to the agenda.**
- 4. Announcements from the Chair** - None to present.

**5. Old Business - Reports from the Executive Council**

**5.1 President's Report** - Brent Burlingham.

- The rental scopes were picked up and moved the basement at the Observatory. Thanks to Ron Waldron, Darrell Chatfield and Nick Larsen for their help.
- A tally of the current membership is around 55 people.

**5.2 Acting Treasurer** - Les Dickson.

- Discussed the finances for the year. There were a few extra expenses this year but overall in good standing.

**5.3 National Council Rep** - Joelle Sheard-Patrick

- National is wanting to remove the grace period between when a membership has expired and needs to be renewed.

**5.4 Activities Coordinator** - Joelle Sheard-Patrick

- None reported.

**5.5 Sleaford Update** - Darrell Chatfield

- The RM will be removing snow on a "as needed" basis.
- Darrell is going to get in touch with Larry about use of the snowblower.

**5.6 SSSP Update** - Les Dickson

- Had a review of the SSSP 2024. The financial report will be released soon and the next star party will be announced in the new year.

## **6. Old Business**

### **6.1 Christmas Party**

- November 29<sup>th</sup> will be our Christmas party to be hosted at Great Western Brewing Company. Details will soon follow.
- No meeting will be held in December.

### **6.2 Ike Thiessen Memorial**

- Discussed the idea of having a plaque with the ability to add several members who have contributed to the centre.
- Darrell to look into pricing and options.

## **7. New Business**

### **7.1 Jeff Swick and Tim Yaworski have recommended Nick Larsen to be appointed the Imaging Group Coordinator.**

It was discussed to combine the Imaging Group and the Observing Group into one night and use separate parts of Sleaford. Nick has accepted this role. Motion for Nick to be the Imaging and Observing Group coordinator was made by Joelle Sheard-Patrick, seconded by Les Dickson; carried.

### **7.2 Insurance for Club Assets** - Discussed compiling a master list of the telescopes stored in the U. of S. Observatory Library to determine what we have, has been sold, or disposed of etc.

### **7.3 Discussion on the club participation in the Meewasin Dark Sky Events** that Tim Yaworski has arranged. The club decided that we will be taking part in these events as a partnership. List of all the events for 2025 are as follows:

- Planet Viewing at Beaver Creek Feb. 7<sup>th</sup> 7-10pm
- Lunar Eclipse at Beaver Creek March 13<sup>th</sup> 10pm
- Lyrids Meteor Shower at Beaver Creek April 22<sup>nd</sup> 9pm
- Perseid Meteor Shower at NE Swale August 12<sup>th</sup> 10:30pm
- Dark Skies at Beaver Creek October 24<sup>th</sup> 7:30pm
- Geminids Meteor Shower at Beaver Creek December 13<sup>th</sup> 9pm

## **8. Motion to adjourn** by Les Dickson; carried. 7:58 PM.

**Minutes of the Monthly General Meeting of the RASC Saskatoon Centre  
Monday, Nov 18th, 2024 - 7:00 pm Hybrid: Online & In-person: U of S Observatory**

Minutes taken and prepared by Lorie Tedford.

**1. Sharing/Networking Time** - 8:00-8:15 pm - all members.

**2. Call to Order** - 8:20 pm - Brent Burlingham (President and Chair)

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- 3. Call for additional announcements/items to add to the agenda.**
- 4. Call out to new members/guests:** Aaron Allinson.
- 5. Adoption of the October General meeting minutes** as printed in the October newsletter. Moved by Lisa Caldwell, seconded by Nick Larson, carried.
- 6. Executive Meeting Summary - Brent Burlingham**
  - The rental scopes were picked up and moved to the U. of S Observatory. Thank you to Ron, Jeff and Nick for their help.
  - The club will be participating in events alongside Tim Yaworski that he has arranged with Meewasin Dark Sky throughout 2025. See list above.
  - The Christmas party will be held on November 29<sup>th</sup> with no meeting in December. It is to be held at Great Western Brewing Company, more details to follow through email.
  - Darrell is looking into options to create a memorial plaque for members who have contributed to the club and have passed on.
  - The Imaging and Observing Group will now be held together at Sleaford with the two groups using different areas of the site. Nick Larsen was appointed the coordinator for the groups.
- 7. Program**
  - 7.1 “The Upcoming Sky”** presented by Colin Chatfield.
  - 7.2 “Everyone Always Gives a Bad Explanation of the Twin Paradox”** Implications and misunderstandings of the theory of special relativity - Dr. Daryl Janzen, U. of S. Department of Engineering Physics.
  - 7.3 “PANP Aurora Workshop”** - Tim Yaworski.
- 8. Call to adjourn** - Moved by Les Dickson; carried.



*Aurora in Nipawin. Taken in October 2024 by Colin Chatfield.*



*My eleven year old Canon Rebel T5i camera died and I bought a new Canon EOS RP camera. My first picture with it was on November 1 of comet C/2023 A3 (Tsuchinshan-ATLAS) through my 80mm Sky-Watcher Equinox telescope. This comet was still good looking even though it had faded from its brightest two weeks earlier. It will continue to be the brightest comet in our skies for the next two months unless something new comes along. Taken by Tenho Tuomi.*

## 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](http://rasc.ca/certificate-programs) for details and contact the RASC Observing Committee Chair at [rasc.ca/contact/observing](http://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](http://rasc.ca/astro-imaging-certificate)

### RASC OBSERVER'S HANDBOOK 2023 – STANDARD EDITION

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.astroloegue.org/al/obsclubs/herschel/hers400.html>

Chatfield Binocular List is at: [https://saskatoon.rasc.ca/Chatfield\\_Binocular\\_List.pdf](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>