

Saskatoon Skies

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

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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 – *vacant* (Donna-Lee May interim president)

Vice-President – Brent Berlingham

Secretary – Rick Huziak

Treasurer – Donna-Lee May

National Council Rep – Les Dickson

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

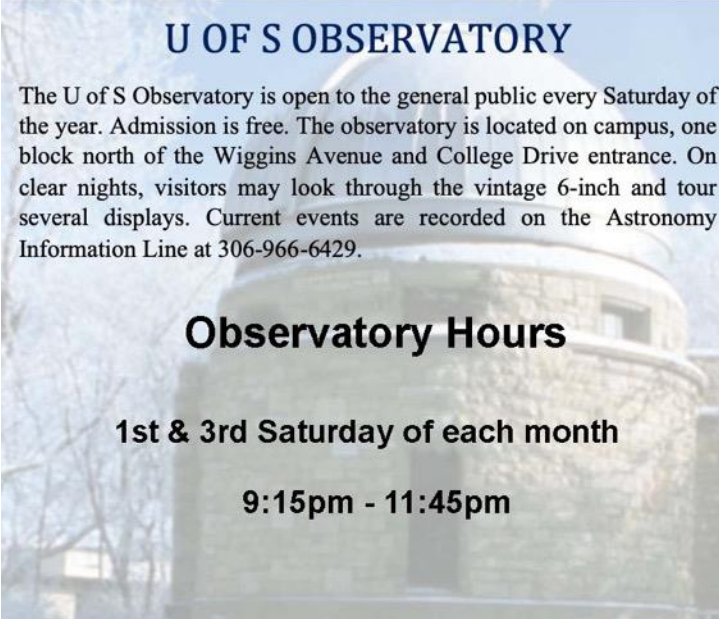
Copy & Collate – Les & Ellen Dickson

Labels & Temps – Mark de Jong

Web Posting/Content Editor – Gord Sarty/Tenho Tuomi

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 graphic with a background image of the U of S 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

Jan 16	RASC Saskatoon Centre General Meeting	Brent Burlingham
Jan 21	Observer's Group - Sleaford Observatory	Brent Gratias

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 16th, 2023 at 8:00PM (Executive meeting at 7:00pm)
Webinar (info below)

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, Tara Magee

To be determined

MINUTES OF DECEMBER MEETINGS

Rick Huziak

Minutes of the Monthly Executive Meeting RASC Saskatoon Centre Monday, December 12, 2022 - 7:00 pm Online (ZOOM)

Attending: Brent Burlingham, Les Dickson, Rick Huziak, Ike Thiessen, Tenho Tuomi, James Wood

1. **Call to order** 7:04 pm – Brent Burlingham (VP)
2. **Approval of the November Executive meeting minutes** as circulated in the December newsletter. **Moved:** Les Dickson. **Seconded:** Tenho Tuomi. **CARRIED.**
3. **Call for additional announcements/items** to add to agenda – Brent Burlingham. (Library added.)

OLD BUSINESS

4. **Loaner Scope Report** – Ike Thiessen.
 - New loaner-scope Tetrad has arrived.
 - One scope remains on loan.
 - Ike will be attending Dakota Dunes on Dec. 17 to see what they are looking for.
5. **Treasurer's Report** - Donna-Lee May – tabled.
6. **Sleaford Report** – Darrell Chatfield & Brent Burlingham
 - New snowblower was delivered to Sleaford by Brent Burlingham & Darrell Chatfield.
 - The yard & deck have been cleared.
 - Darrell C. will look into buying spare keys. One key is at Sleaford in Warm-up Shelter. Darrell C. has the second key. (We need a key box in the Warm-up Shelter – the “electrical box”).
 - Training for maintenance & use of the snowblower. – Will ask Darrell C. to develop a short manual.
 - We have a photo of the snowblower (Darrell's report) for our new insurance records.
 - Interface with Brent Gratias. (Darrell C. will talk to Brent Gratias & Larry Scott.)
 - There is a Sleaford Site Manual (made by Bill Hydromako) – Rick Huziak will update & place a copy at Sleaford.
7. An **Inventory of Centre Assets** is being made by Rick Huziak. Darrell Chatfield has done a more accurate inventory of Sleaford.

8. **Nominating Committee** update:
- **Donna-Lee May has volunteered to be Interim President** so we can continue with required business. Committee agrees.
 - We are still looking for a permanent president, activities coordinator and speaker coordinator.
9. The **Sleaford Joint Management Committee** has met. Their minutes are in the Dec. 2022 newsletter.
- Les Dickson has requested to be replaced on the committee. Brent Burlingham will approach a new rep.
 - Possible 2nd U of S Roll-off construction – U of S should propose and the RASC will discuss.
 - Trimming of south trees may be unnecessary for remote scope visibility – already below 10-degrees.
 - Security cameras – who is going to look into this?
10. **National Outreach event** registration for 2022 is being worked on and will be submitted – Rick Huziak
11. How to handle **two recent requests for information.** – Possible mentorship program or a membership survey might be done – Brent B. will talk to George Charpentier to choose a platform and create a survey.

NEW BUSINESS

12. **National Council Report** (Dec. 4 meeting) – Les Dickson – see article in the Dec. 2022 newsletter.
- **The National Annual Report and Financial Statement** will be due by Jan. 31, submitted to Robin Foret.
 - **Driven database** is improving in performance – weekly updates are being reported.
 - National financial position (loss) discussed. National will begin discussions with centres beginning in January.
13. **Activities Report – Rick Huziak**
- Meewasin Valley Authority would like to discuss 2023 events.
14. **Review of Committees & Committee Mandates** – tabled to the January meeting.
15. **Centre Library - James Wood** – Would like to catalog the library. Darrell Chatfield may have information. On-line cataloguing: *The Library Thing* or *LexWin* from Lex Systems suggested.
16. **Motion to adjourn – Moved:** Les Dickson. 7:59 PM. **CARRIED.**

**Minutes of the Monthly General Meeting RASC Saskatoon Centre
Monday, December 12, 2022 - 8:00 pm Online (ZOOM)**

7 members on-line at beginning of meeting.

- 1. Sharing / Networking Time 8:00 PM** – all members
- 2. Call to order** – 8:17 PM – Brent Burlingham (VP)
- 3. Call for additional items or changes to the agenda** – Brent Burlingham.
- 4. Call out to new members/guests:** None
- 5. Adoption of the November General Meeting minutes** as circulated in the December newsletter. **Moved:** Ron Waldron. **Seconded:** Mile Dolan. **CARRIED.**
- 6. Executive Meeting summary** – Brent Burlingham
 - See Executive Meeting.
 - **The following positions remain unfilled:**
 - President** – (2-year term) – vacant
 - Activities Coordinator** – vacant
 - Speaker Coordinator** – vacant
 - Sleaford Joint Management Committee rep** – vacant (one position)

OLD BUSINESS

- **In-person Meetings** – should we start up again? **Moved:** The Centre begins in-person hybrid/Zoom meetings at U of S Room 175 Physics starting February – Ron Waldron. **Seconded:** James Wood. **Discussion:** Will we have hybrid meetings? Brent B. can look into what equipment would be necessary to set up such a meeting. (Consult with Daryl Janzen). **CARRIED.**

NEW BUSINESS

- **Emailing of Agenda & Opening General Meeting** up to all public (and other Centre members). We will email agenda out before all meeting to promote participation. Meetings will be opened up to everyone using the National RASC account. (Previous meetings were limited by U of S bandwidth). Link will be added to the Saskatoon Skies newsletter and Activities page.

7. Program:

- *The 2022 Sask Summer Star Party in Pictures* – Les Dickson & George Charpentier

8. Call to adjourn – 9:31 PM. **Moved:** Les Dickson. **CARRIED.**



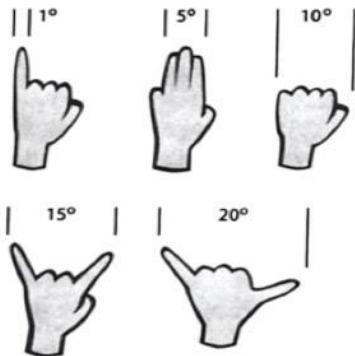
Rosette Nebula captured by Tim Yaworski from his driveway in the city. It is a stack of 210 three minute exposures using both a narrowband filter for some frames and a light pollution filter for the others.

JANUARY NIGHT SKY EVENTS AND INFO

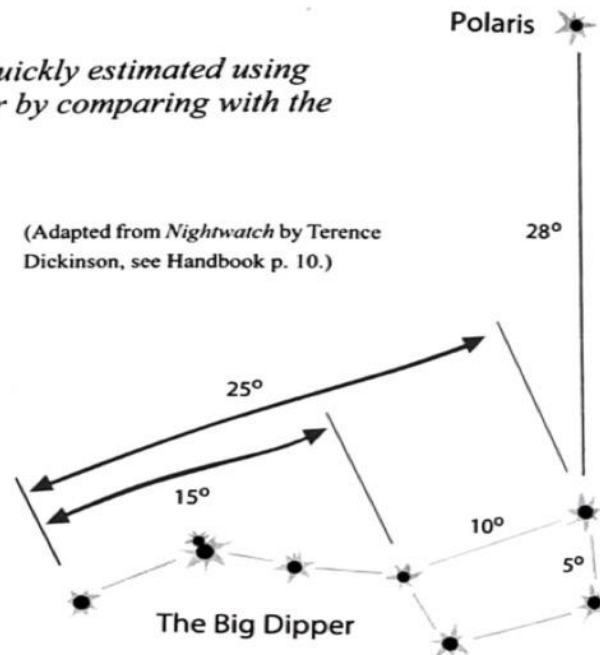
Images on the next few pages taken with permission from the 2023 Observer's Handbook. It can be obtained by joining the RASC here <http://rasc.ca/join> or ordered from <https://secure.rasc.ca/Portal/Shop/RASC/Store/StoreMain.aspx?Category=CURRPUB>

HANDY SKY MEASURES

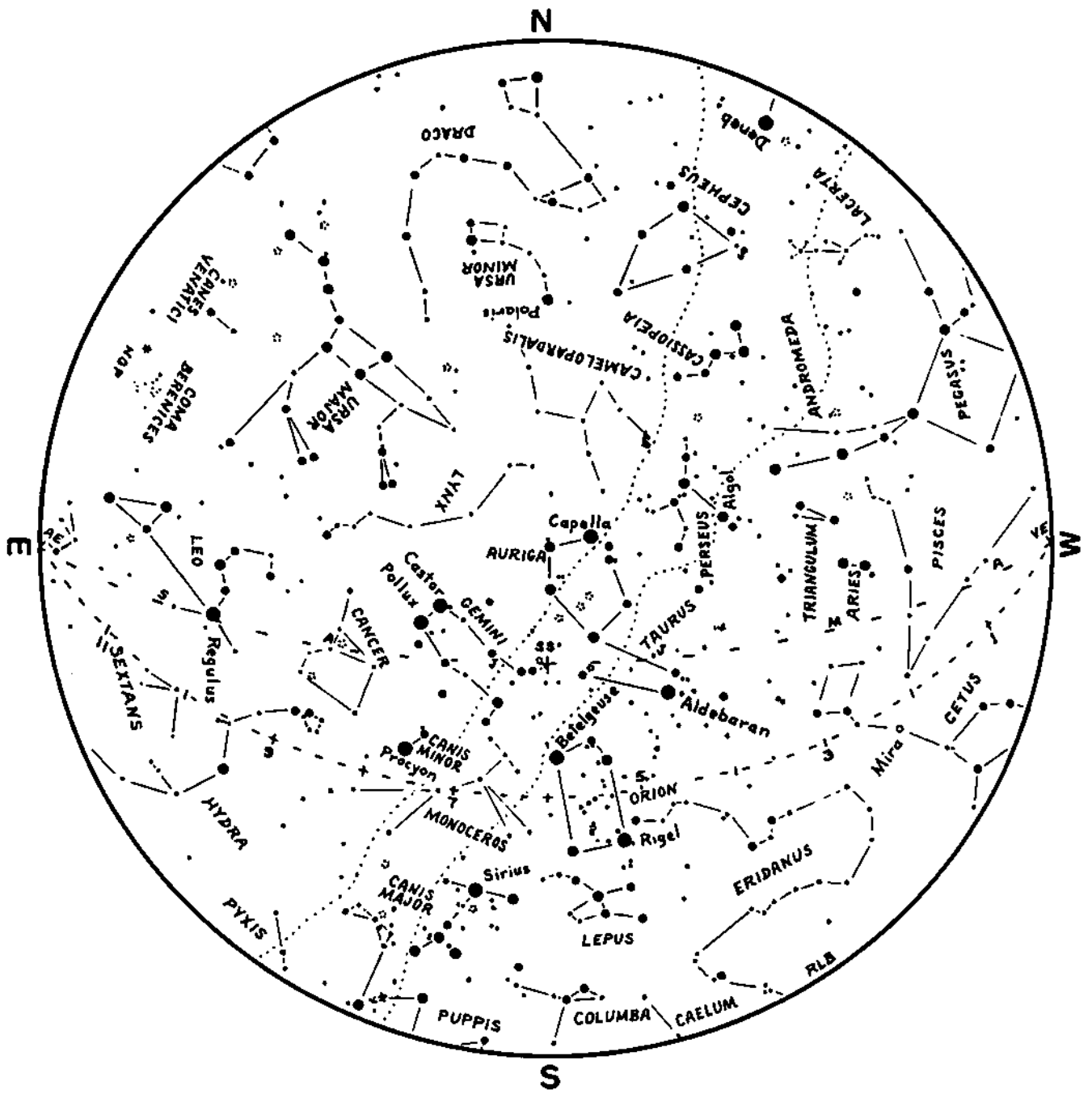
Angular measure in the sky can be quickly estimated using the fingers of an outstretched arm, or by comparing with the star separations in the Big Dipper.



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



Time (UT)			JANUARY EVENTS		Jupiter's Satellites	
d	h	m			West	East
Sun.	1	15 25	Moon at ascending node		1.0	
		22	Uranus 0.7° S of Moon, occultation†		2.0	Europe
Mon.	2		Mercury at perihelion			Io
		3 36	Algol at minimum		3.0	
Tue.	3	20	Mars 0.5° N of Moon, occultation‡		4.0	Callisto
Wed.	4	3	Quadrantid meteors peak		5.0	
		16	Earth at perihelion (147 098 925 km)		6.0	
Thu.	5	0 25	Algol at minimum		7.0	
Fri.	6	12 50	Double Shadows on Jupiter		8.0	
		23 08	full Moon		9.0	
Sat.	7	13	Mercury in inferior conjunction		10.0	Ganymede
		14	Pollux 1.9° N of Moon		11.0	
		21 14	Algol at minimum		12.0	
Sun.	8	9	Moon at apogee (406 458 km)		13.0	
		19	Pallas at opposition		14.0	
Mon.	9				15.0	
Tue.	10	18 03	Algol at minimum		16.0	
Wed.	11				17.0	
Thu.	12	20	Mars stationary		18.0	
Fri.	13		Mercury at greatest heliocentric lat. N		19.0	
		14 52	Algol at minimum		20.0	
Sat.	14				21.0	
Sun.	15	2 10	last quarter		22.0	
Mon.	16	6 32	Moon at descending node		23.0	
		11 41	Algol at minimum		24.0	
Tue.	17		Venus at greatest heliocentric lat. S		25.0	
Wed.	18	12	Mercury stationary		26.0	
Thu.	19	8 30	Algol at minimum		27.0	
Fri.	20		Jupiter at perihelion		28.0	
Sat.	21	20 53	new Moon (lunation 1238)		29.0	
		21	Moon at perigee (356 568 km) Large tides		30.0	
Sun.	22	5 19	Algol at minimum		31.0	
		20	Venus 0.4° S of Saturn			
Mon.	23	3	Uranus stationary			
		7	Saturn 4° N of Moon			
		8	Venus 3° N of Moon			
Tue.	24					
Wed.	25	2 08	Algol at minimum			
		6	Neptune 3° N of Moon			
Thu.	26	2	Jupiter 1.8° N of Moon			
Fri.	27	22 57	Algol at minimum			
Sat.	28	15 19	first quarter			
		16 05	Moon at ascending node			
Sun.	29	4	Uranus 0.9° S of Moon, occultation††			
Mon.	30	6	Mercury greatest elongation W (25°)			
		19 46	Algol at minimum			
Tue.	31	4	Mars 0.1° N of Moon, occultation‡‡			

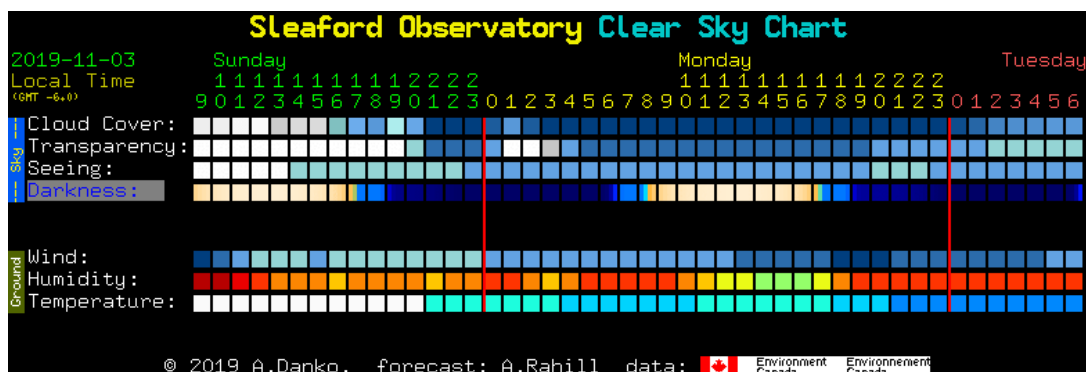


CLEAR SKY AND WEATHER INFO

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

BOOKS 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 R. Morales \$15.00
“Observing the Constellations”	1989	J. Sanford	Color charts \$10.00

2023 RASC CALENDARS



2023 calendars have arrived and there is still a few left. If you want a 2023 RASC Calendar, we have a limited supply available for \$20 each. **Call Donna-Lee at 780-913-2785.** They can be picked up at her house in Saskatoon, or if you live away from Saskatoon, we can arrange to mail them out to you at a small additional cost.

SERVICE MEDALS

Rick Huziak



I am pleased to announce that Merlyn Melby's RASC Service medal is finally in his hands. As part of my yearly Christmas visiting of family, I drive a circle from Saskatoon to Regina to Yorkton then back to Saskatoon. Merlyn Melby is temporarily living in Esterhazy, SK – just small deviation from my route, so I managed to catch up with him on January 31st. The side trip to Esterhazy was very nice; a part of the drive from Regina is through the scenic Qu'Appelle Valley. Merlyn and I spent a several hours reminiscing about the RASC and his journey as a young astronomer. We are very proud of Merlyn's achievements and contributions as a builder of the Saskatoon Centre. You can read Merlyn's citation in *Saskatoon Skies*, May 2022, page 16. It usually doesn't take this long to get medals distributed, but we didn't get them until September due to production issues, though they were awarded by National last February! Congratulations, Merlyn!



Lunar Eclipse taken by Justin Lukan

SASK SUMMER STAR PARTY UPDATE

Les Dickson - SSSP Organizing Committee Chair

Hello all and Happy New Year

The SSSP committee is holding its first meeting of the new year on January 19th. Some of the priorities for January include recruiting new committee members, especially a new Door-prize Coordinator and someone to handle social media duties. Many of our members have been organizing this star party for many years, so we need additional people who can assist and learn the ropes, eventually taking over some positions. We want to bring in lead volunteers earlier to help with planning and recruit and train the on-site volunteers. We hope to have the new website up and running before the end of the month. We also need to identify and invite our speakers and clinic presenters. We hope we can count on our members to step up and help us out this year. If you are interested, contact me at email: astrochem@sasktel.net or cell: 306-270-9184.

SSSP 2023 runs from August 15 to 20, 2023 and will be held at the Cypress Hills Dark-Sky Preserve and Interprovincial Park.

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

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	96
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

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: <http://www.rasc.ca/observing>

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

Binocular List is at: https://www.usask.ca/rasc/Chatfield_Binocular_List.pdf

“Isabel Williamson Lunar Observing Program Guide”:

<http://www.rasc.ca/sites/default/files/IWLOP2015.pdf>

Program details can be found at: <http://www.rasc.ca/williamson/index.shtm>