

Saskatoon Skies

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

Volume 52, Number 05

May 2021



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

In This Issue:	
Membership Information / Officers of the Centre	2
Newsletter Info	3
U of S Observatory Info	4
Calendar of Events & Meeting Info	5
Speakers for Meetings / Minutes of April Meetings	6-8
Clear Sky Chart / Weather Info / Light Abatement Info	9
May Night Sky Events	10-12
Books for Sale / SSSP 2021 Update	13-14
Observing Clubs & Certificates	14-15

MEMBERSHIP? JOIN TODAY!

Regular: \$96.00 /year

Youth: \$52.00 /year

Family: \$90.50 + \$41/additional adult + \$21.10/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://www.usask.ca/rasc/telescopes.html>
- use of the Centre library
- SkyNews Magazine (bimonthly)

SASKATOON CENTRE'S MAIN OFFICERS:

President – Ron Waldron

Vice-President – Mike Dolan

Secretary – Rick Huziak

Treasurer – Norma Jensen (until Jan. 2021)/Donna-Lee May (Jan. 2021 onward)

National Council Rep – Les Dickson

Canadian Tire money - Darrell Chatfield

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

NEWSLETTER INFO

Newsletter Editor – Colin Chatfield

Copy & Collate – Les & Ellen Dickson

Labels & Temps – Mark de Jong

Web Posting – Gord Sarty

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 throwback image from last July, chasing Comet Neowise and a thunderstorm just north of Humboldt, SK. Taken by Tim Yaworski.

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.

January – February	7:00 – 9:30 pm
March	8:00 – 10:30 pm
April – August	9:15 – 11:45 pm
September	8:30 – 11:00 pm
October – December	7:00 – 9:30 pm

Temporarily Closed. Check the website for updates!

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

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



Aurora over the Northeast Swale in Saskatoon April 17, 2021 taken by Colin Chatfield

RASC CALENDAR OF EVENTS & MEETING INFO

May 17	RASC General Meeting - 7:00pm (info below)	Ron Waldron
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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: <http://www.usask.ca/rasc/activities.html>

May RASC General Meeting

for all members and guests

Join us on May 17, 2020 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).

8:00pm - **Main Program**

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.

Speakers:

- Colin Chatfield & Tara Magee - "The Upcoming Sky"
- Main Speaker - To Be Determined

SPEAKERS FOR MEETINGS

Rick Huziak

The Centre always needs speakers for meetings - plain and simple. Email rickhuziak@shaw.ca to volunteer to give a short or long talk. We want to hear about what you are doing! Thanks in advance.

MINUTES OF APRIL MEETINGS

Rick Huziak

Minutes of the Executive Meeting - RASC Saskatoon Centre

April 19, 2021 - 7:00 pm Online (ZOOM)

Recorded by Rick Huziak - Secretary

Attending (by end of meeting): Ron Waldron, Mike Dolan, Rick Huziak, Donna-Lee May, Darrell Chatfield, Colin Chatfield, Tara Magee, (Dan Heiberg - momentary), Grant Ursaki, Tim Yaworski, Kim Mysyk. Later: Yannis Pahtouroglou, Bruce Kosugi (Charlie Lake, BC), Dan Bechtel

1. **Call to order** 7:03 pm – Ron Waldron.
2. Approval of the **Executive Minutes** as circulated: **Moved:** Mike Dolan, **Seconded:** Darrell Chatfield. **Approved.**
3. **Call for additional announcements/items** to add to agenda – none added.
4. **Committee Reports** – None reporting.
5. **Old business:**
 - **Bylaws current status** – Ron Waldron – still being worked on by Jim Gorkoff. Discussion ensued regarding timeframe for completion. Table to End of May.
 - **Update on Sleaford 16-inch telescope refurbishment** at the U of S – Ron Waldron reports that work is progressing well. Yannis is concerned over small circular cracks on corrector plate, but will loosen off screws 1/16 turn to relieve stress. Scope Hall-sensor magnet will be reattached. Gears will be re-greased with aircraft grease. Focus (mirror flop) will be fixed next.

6. New business:

- **Treasurer's Report** – Donna-Lee May
 - SSSP deposits are coming in and balance (from Square)
 - \$18,317.65 in the bank in General Account (includes RASC & SSSP)
 - need budgets submitted now from anyone who spends money.
- **Move to request a budget for external speakers until 30 Sept. for \$50.**
Moved: Rick Huziak. **Seconded:** Les Dickson. **Carried.**
- **E-mail change suggestion** for Saskatoon Skies newsletter – propose to send newsletters out from Centre email (not personal emails) – Colin Chatfield. Colin will pursue.
- **Reem Khalifeh's** (Communications and Marketing assistant - National Office) **request for Twitter and Instagram Account information** – Ron Waldron. Tim Yaworsky has already responded. **Saskatoon Twitter** is: RASCyxe

7. Call to adjourn 7:45 PM. Moved: Colin Chatfield. **Seconded:** Les Dickson. **Carried.**

Minutes of the Annual General Meeting - RASC Saskatoon Centre April 19, 2021 - 8:00 pm Online (ZOOM) Recorded by Rick Huziak - Secretary

30 people attending on-line for the meeting

- 1. 8:00 PM Sharing / Networking Time** – all members
- 2. 8:05 PM - Call to order** – Ron Waldron – meeting to start early due to number of attendees online.
- 3. Call out to new members/guests:** Ron acknowledged the large number of guests from other Centres.
- 4. Adoption of March General Meeting minutes** as circulated: **Moved:** Mike Dolan. **Seconded:** Ellen Dickson. **CARRIED.**

- 5. Treasurer's Report** – Donna-Lee May reports \$18,317.65 in the bank in General Account (includes RASC & SSSP funds).
- 6. Committee Reports**
- **SSSP Report:** Les Dickson – as of April 18, 42 registrations, 79 attendees, 2/3rds of campsite are booked. Addressed Covid-19 mitigation measures.
- 7. RASC Service Awards Recipients** – Rick Huziak – Pictures were taken of the medal presentations for Les Dickson, Ellen Dickson, Darrell Chatfield and Ron Waldron. (See the Citations in the April newsletter).
- 8. Program: - Colin Chatfield & Tara Magee - “The Upcoming Sky”**
- **Daryl Janzen - “Discovery of SN 2021gmj and other great stuff”** - The robotic telescope at Sleaford made its first supernova discovery a few weeks ago. Daryl gave an update on what else this telescope is doing.
- 9. Mike Dolan thanks Colin Chatfield & Tim Yaworsky for the recent TV appearance for Dark-sky Week.**
- 10. Move to Adjournment 9:51 pm Moved:** Mike Dolan **Seconded:** Darrell Chatfield: **CARRIED.**



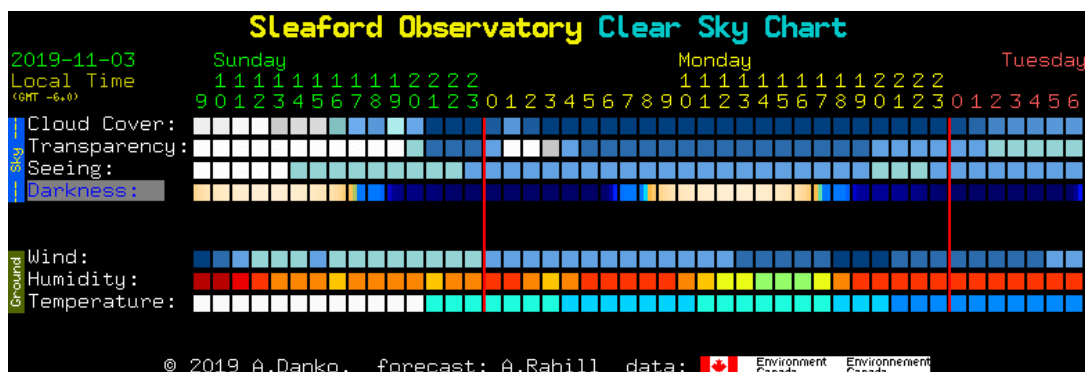
Aurora with big tree taken by Tara Magee in March 2021 southeast of Saskatoon

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 Abatement Committee -

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



www.darksky.org



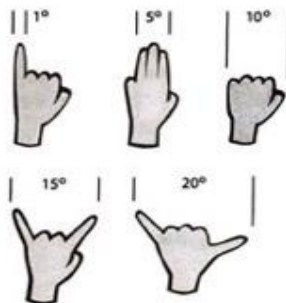
Comet C/2020 R4 (ATLAS) has been the brightest comet in the sky for the last two months. Picture taken by Tenho Tuomi on May 5 when it was .59 au from earth.

MAY NIGHT SKY EVENTS AND INFO

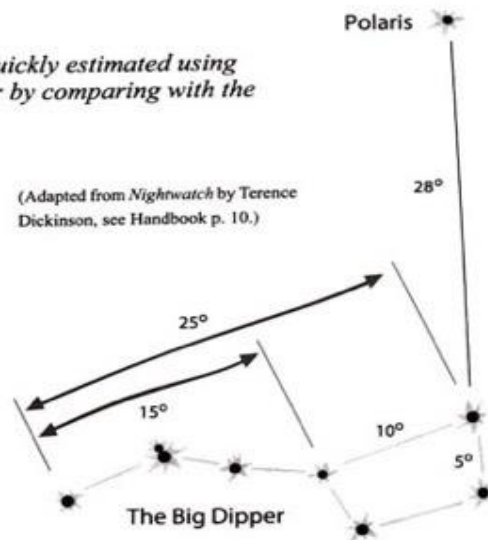
Images on the next few pages taken with permission from the 2020 Observer's Handbook. It can be obtained by joining the RASC here <http://rasc.ca/join> or ordered from <https://secure.rasc.ca/Portal/Shop/RASC/Store/StoreMain.aspx?Category=CURRPUB>

HANDY SKY MEASURES

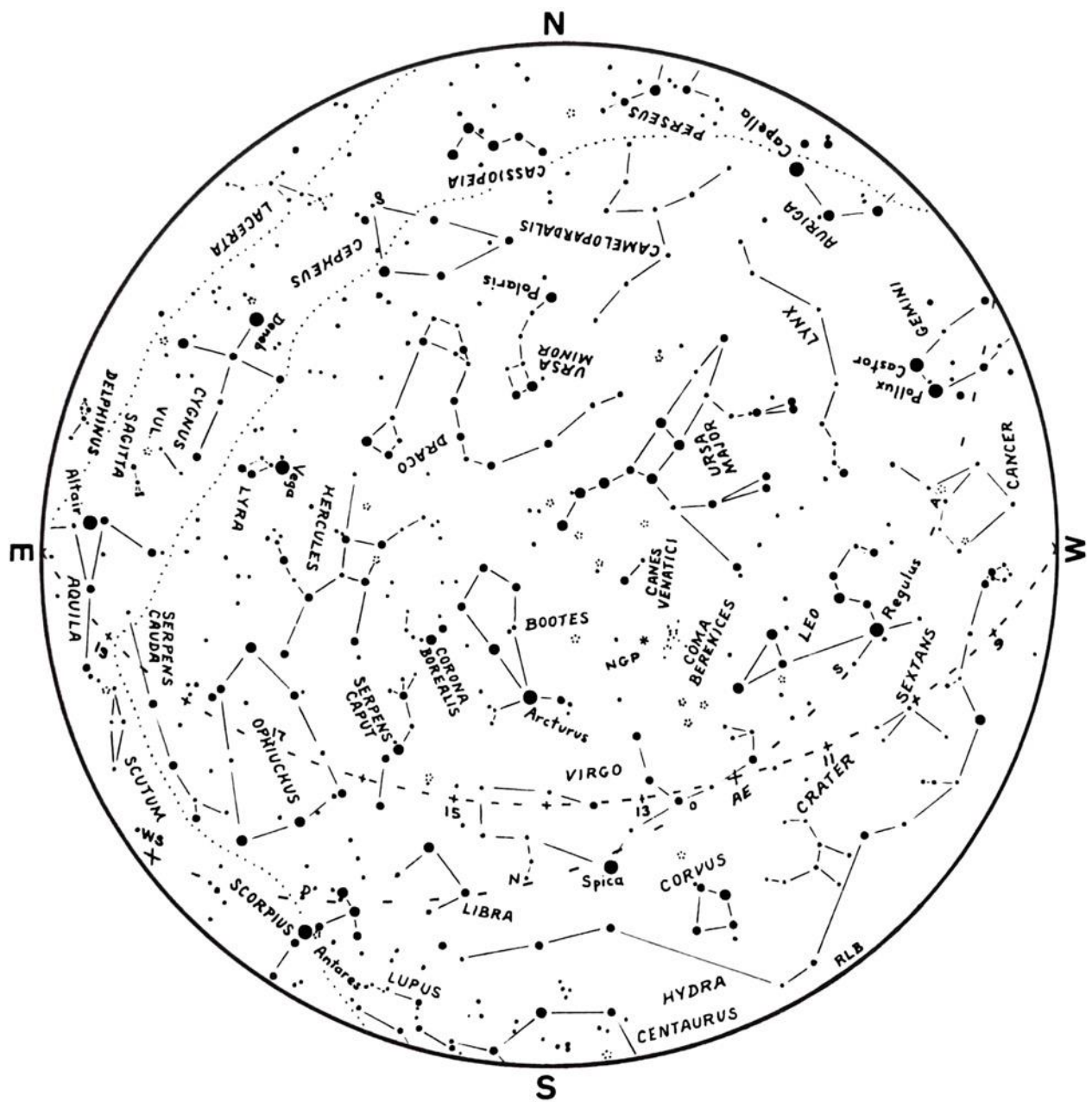
Angular measure in the sky can be quickly estimated using the fingers of an outstretched arm, or by comparing with the star separations in the Big Dipper.


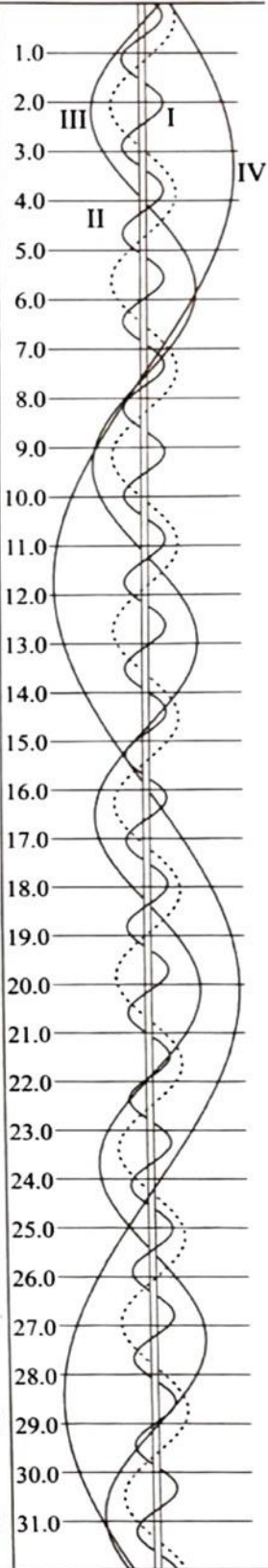


















(Adapted from *Nightwatch* by Terence Dickinson, see Handbook p. 10.)



RASC OBSERVER'S HANDBOOK 2020



Time (UT)			MAY EVENTS		Jupiter's Satellites	
	d	h m			West	East
Sat.	1	10 28	Algol at minimum		1.0	
Sun.	2				2.0	
Mon.	3	17	Saturn 4° N of Moon		3.0	
		19 50	Last quarter		4.0	
		22	Mercury 2° S of Pleiades (M45)		5.0	
Tue.	4	7 17	Algol at minimum		6.0	
		21	Jupiter 5° N of Moon		7.0	
Wed.	5				8.0	
Thu.	6	2	η-Aquariid meteors peak		9.0	
Fri.	7		Mercury at greatest heliocentric lat. N		10.0	
		4 06	Algol at minimum		11.0	
Sat.	8				12.0	
Sun.	9		Venus at ascending node		13.0	
Mon.	10	0 55	Algol at minimum		14.0	
Tue.	11	19 00	New Moon (lunation 1217)		15.0	
		22	Moon at apogee (406 512 km)		16.0	
Wed.	12	21 44	Algol at minimum		17.0	
		22	Venus 0.7° N of Moon, occultation†		18.0	
Thu.	13	18	Mercury 2° N of Moon		19.0	
Fri.	14				20.0	
Sat.	15	18 33	Algol at minimum		21.0	
Sun.	16	5	Mars 1.5° S of Moon		22.0	
Mon.	17	6	Mercury greatest elongation E (22°)		23.0	
Tue.	18	15 22	Algol at minimum		24.0	
Wed.	19	19 12	First quarter		25.0	
Thu.	20				26.0	
Fri.	21	12 11	Algol at minimum		27.0	
Sat.	22				28.0	
Sun.	23	20	Saturn stationary		29.0	
Mon.	24	9 00	Algol at minimum		30.0	
Tue.	25				31.0	
Wed.	26	2	Moon at perigee (357 311 km) Large tides			
		11 14	Full Moon (largest in 2021)			
			Total Lunar Eclipse (p. 126)			
Thu.	27	5 49	Algol at minimum			
Fri.	28					
Sat.	29	6	Mercury 0.4° S of Venus			
Sun.	30		Mercury at descending node			
		2	Mercury stationary			
		2 38	Algol at minimum			
Mon.	31	1	Saturn 4° N of Moon			

†Most of New Zealand, E Polynesia, Easter Island

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

SSSP 2021 UPDATE

Les Dickson

On April 19th, we received word that our event application to the Ministry of Parks, Culture and Sport was approved, so unless the COVID-19 situation changes for the worst, SSSP 2021 is a go!

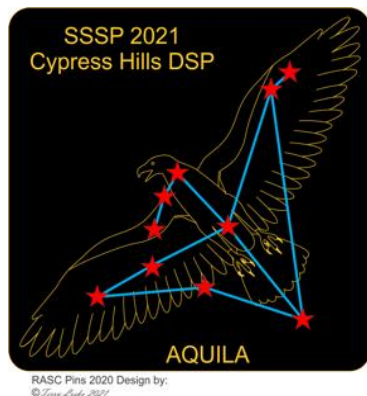
We started taking reservations for camping sites the morning of Saturday April 17th and opened registration a few days earlier. We must have tapped some pent-up desires to get out in the fresh air under dark skies as we had 81 of 122 campsites reserved in just over 24 hours and had received about 42 registrations in the same period. As of the evening of May 10th, we have 85 campsites booked and have 126 people registered. Since only about half of the people who have reserved campsites have registered, we can expect to nearly double our registrations in the coming weeks.

Our pins and shirts are always popular items. We have selected our final designs. The pins depict the constellation Aquila, the Eagle. A nearly final draft is shown below. Graphic design is by Terry Lesko. Vance Petriew designed a logo for the shirts depicting the recent conjunction of Jupiter and Saturn, shown below.

We have confirmed that three vendors will be attending, including All-Star Telescope and Fervent Astronomy.

We are planning an on-line Astrophotography, Sketch and Art Contest this year, organized by Laura Eglar and George Charpentier.

We have not made any concrete plans for outdoor presentations or clinics. We hope to have more firm plans by next month. Check our website at <https://sssp.saskatoon.rasc.ca/> for updates.



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. 314)

THE FINEST NGC OBJECTS (p. 318),

THE DEEP-SKY CHALLENGE OBJECTS (p. 322),

DEEP-SKY GEMS (p. 324).

See www.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** for intermediate to advanced members. In addition, **Astroimaging certificates** are available for those members with a photographic bent. See www.rasc.ca/astro-imaging-certificate

RASC OBSERVER'S HANDBOOK 2020

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
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,*

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

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

The Messier, Finest NGC and David Levy's Deep-Sky Gems lists can be found in the *Observer's Handbook*.

The Explore the Universe list is available here <http://www.rasc.ca/explore-universe>

On-line Messier and Finest NGC lists, charts and logbooks:

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

On-line 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>