

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: \$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 – 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 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.



Shooting the shooter shooting the sky. Taken by Colin Chatfield March 13, 2021 with a Canon 7D MKII, Tokina 11-16mm f/2.8. This is a panorama of 14 images stitched together. Each picture was taken at 16mm, 15 second exposures, 3200 ISO, f/2.8.

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/>



May 26th Lunar Eclipse by Tenho Tuomi. Photos taken every 5 mins with a 300mm lens

RASC CALENDAR OF EVENTS & MEETING INFO

June 12	Observers Group - Sleaford Observatory	Larry Scott
June 21	RASC General Meeting - 7:00pm (info below)	Ron Waldron

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>

June RASC General Meeting

for all members and guests

Join us on June 21st, 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"**
- **Ron Waldron "The Possibility of Life in the Universe"** - This digital presentation explores the possibility that there may be life elsewhere in the universe. Learn the basics of what created life on earth and if those conditions exist in other worlds.

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 MAY MEETINGS

Rick Huziak

**Minutes of the Executive Meeting - RASC Saskatoon Centre
May 17, 2021 - 7:00 pm Online (ZOOM)
Recorded by Rick Huziak, Secretary**

Attending: Ron Waldron, Mike Dolan, Rick Huziak, Daryl Janzen, Tenho Tuomi, Yannis Pahatouoglou, Grant Ursaki, Les Dickson, Cam McLelland, Darrell Chatfield, Tim Yaworski, Colin Chatfield (later), Tara Magee (later)

1. Call to order: 7:01 PM – Ron Waldron.
2. **Approval of the Executive Minutes** as circulated. **Moved:** Mike Dolan. **Seconded:** Les Dickson. **CARRIED.**
3. Call for **additional announcements/items** to add to agenda
4. **Committee Reports** – no reports.
5. **Old business:**
 - **16-inch telescope at Sleaford update** – Yannis Pahatouoglou reports the broken Hall sensor magnet has been replaced, gears rebuilt and greased. Main (RA) gear will be measured for concentricity. Rick Huziak is having trouble sourcing a new 18V power supply. The optical tube assembly (performance and mirror flop) will be looked at next. Yannis needs CCD software to be able to image optical performance, which Rick will attempt to supply.
 - **Centre Bylaws** – Ron Waldron reports that Jim Gorkoff has provided an update. Les Dickson and Donna-Lee May (Bylaw Committee) will have a preliminary copy by the end of May for review.

6. New business:

- **Treasurer's Report** – Donna-Lee May (provided by Rick Huziak) – we have received at \$100 payment for a rental scope.
- **Report to National Council** by 25 May – Les Dickson – Report will focus on the *Random Acts of Astronomy* program (working well) and the *Youth Group* sustainability (not working.) and that meeting attendance is still lower in spite of Zoom availability.
- **The future of outdoor maintenance at Sleaford Observing Site**– Ron Waldron reports that Larry Scott has been Observing Group Coordinator (and snow clearer/grass cutter) for 15 years and is retiring and moving within a few years. A new member or group of members will have to take over the work within the next few years. An ad for this will be placed in the June newsletter. Discussion ensues.

7. Call to adjourn 7:49 PM. **Moved:** Tim Yaworski **Seconded:** Darrell Chatfield.
CARRIED.

May 17, 2021 - 8:00 pm Online (ZOOM)
Recorded by Rick Huziak, Secretary

18 people on line at beginning of meeting.

1. Sharing / Networking Time – all members
2. **Call to order.** 8:15 PM - Ron Waldron
3. Call out to **new members**/guests. George Peterson acknowledged. Jacob Manonyane acknowledged at end of meeting.
4. **Adoption of March General Meeting minutes** as circulated. **Moved:** Tim Yaworski. **Seconded:** Les Dickson. **CARRIED.**
5. **Treasurer's Report** – Donna-Lee May (provided by Rick Huziak) – we have received at \$100 payment for a rental scope.

6. **Committee Reports – SSSP 2021** – Les Dickson – Camping is pretty full. Tents may have trouble due to lack of appropriate sites. The Resort rooms are being returned on May 24. SSSP will have low-impact COVID programming. On-line art show and sketching contest being put together by Laura Egler and George Charpentier.

7. **Highlights of the Executive Meeting** – Ron Waldron

a. Sleaford Observing Coordinator – Larry Scott would like to train new coordinators. (See Executive minutes for more detail).

8. **Program:**

- Colin Chatfield/Tara Magee - *The Upcoming Sky*

- Tenho Tuomi - *Photographing Emission Nebulae with a Modified Canon Camera*

- Rick Huziak - *The Amazing Nova Cassiopeia 2021*

9. End of Meeting discussion – Rick Huziak – there are **two Starlink passes tonight** at 10:03 PM and 11:43 PM

10. Adjournment 9:20 pm. - **Moved:** Cam McLelland. **Seconded:** Tara Magee. **CARRIED.**

International Astronomical Union

Gord Sarty

Rick Huziak is Canada's First and Only Honorary Member of the International Astronomical Union

The International Astronomical Union (IAU) is the international association of professional astronomers who promote activities to advance the science of astronomy. Officially its mission is "to promote and safeguard the science of astronomy in all its aspects, including research, communication, education and development, through international cooperation". The IAU, for example, gives official proper names to all astronomical objects, like Asteroid (4143) Huziak. The IAU is composed of professional astronomers from all over the world, at the Ph.D. level and beyond, who are active in professional research, education and outreach in astronomy. Recently the IAU also added Junior Members. Even more recently the IAU added another membership category, that of Honorary Member.

The IAU Honorary Member category aims to give official recognition to those individuals who have significantly contributed to the progress of astronomical research and culture in their country, but who do not qualify as Individual Members. This past year Canada, through our own professional astronomer association CASCA, was allowed to nominate one Canadian to the IAU Executive Committee for admittance as an Honorary Member. As a member of CASCA and the IAU, I nominated Rick to the CASCA Board who then determined that Rick was the one Canadian that they would nominate to the IAU.

On May 24 we learned from CASCA Secretary Judith Irwin that Rick is now Canada's first and currently only Honorary Member of the IAU!

This is a well-deserved honor. As you all will know, Rick has been an active and dedicated astronomer all his life. He has contributed to variable star astronomy, meteorite hunting expeditions, light pollution abatement, the Saskatchewan Summer Star Party and has generally kept everybody enthusiastic about amateur astronomy for a long time - leading by example.

Rick joins 9 other Honorary Members who were admitted to the IAU in 2018. Those other members are from the Czech Republic, Egypt, Ethiopia, France, Hungary, Ireland, Russia, the Ukraine and the United States. Acceptance into the IAU as an Honorary Member is a very rare honor. We are so proud of you, Rick!



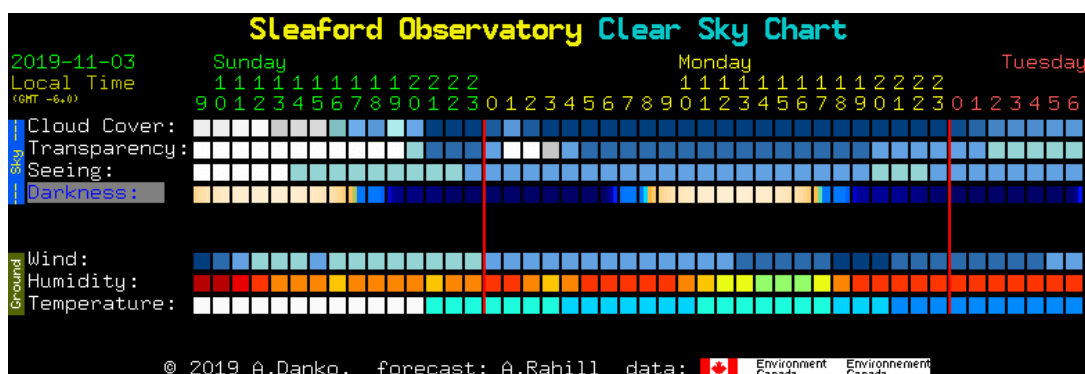
Comet NEOWISE with the aurora taken by Tara Magee

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

RASC SASKATOON CENTRE WEBSITE UPDATE

Please note that the current website address for the RASC - Saskatoon Centre has changed. If you had it bookmarked, for example, it may need to be updated.

The new website is:

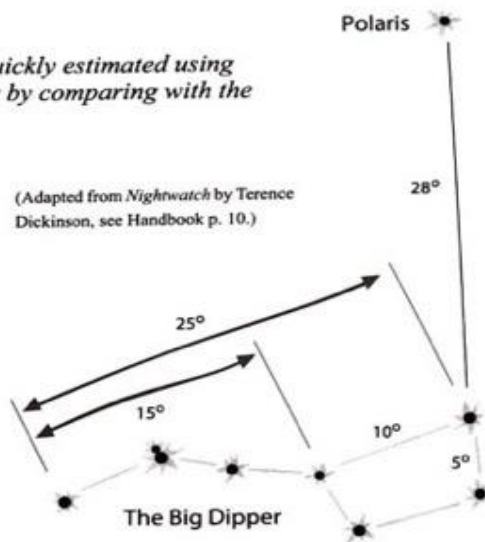
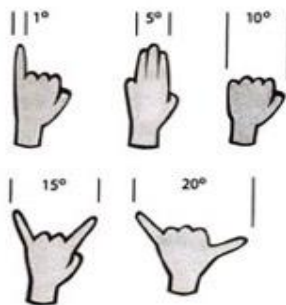
<https://saskatoon.rasc.ca>

JUNE NIGHT SKY EVENTS AND INFO


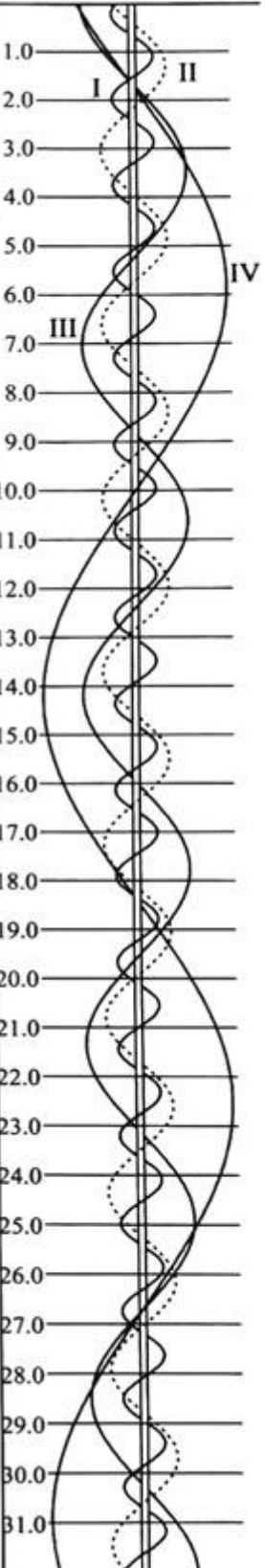










Images on the next few pages taken with permission from the 2021 Observer's Handbook. It can be obtained by joining the RASC here <http://rasc.ca/join> or ordered from <https://secure.rasc.ca/Portal/Shop/RASC/Store/StoreMain.aspx?Category=CURRPUB>

HANDY SKY MEASURES

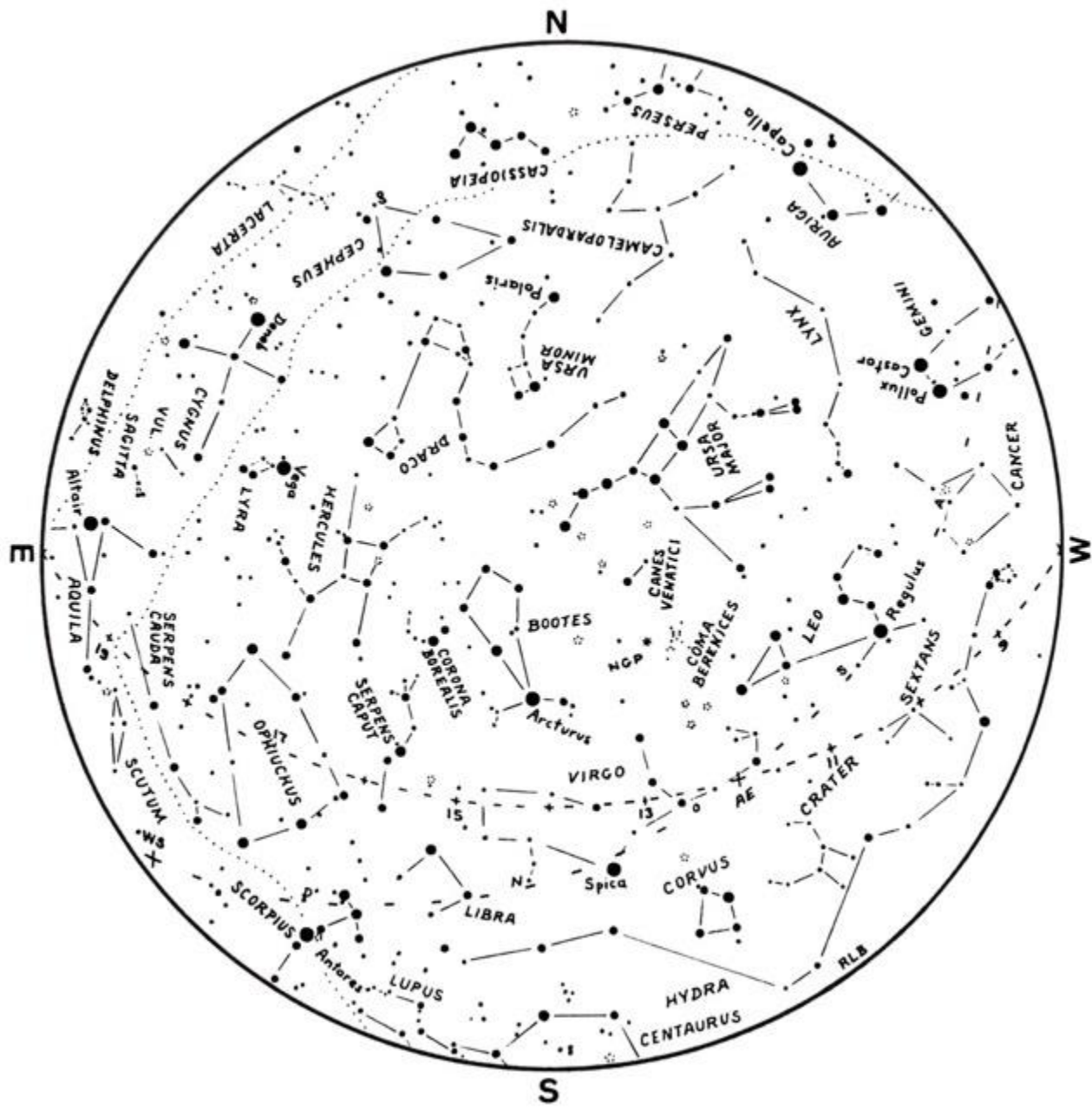
Angular measure in the sky can be quickly estimated using the fingers of an outstretched arm, or by comparing with the star separations in the Big Dipper.



RASC OBSERVER'S HANDBOOK 2020

Time (UT)		JUNE EVENTS	Jupiter's Satellites	
d	h m		West	East
Tue.	1 9	Jupiter 5° N of Moon		
	23 27	Algol at minimum		
Wed.	2 7 24	Last quarter		
Thu.	3			
Fri.	4	Mars at greatest heliocentric lat. N		
	20 16	Algol at minimum		
Sat.	5			
Sun.	6 22	Juno at opposition		
Mon.	7 6	Uranus 2° N of Moon		
	17 05	Algol at minimum		
Tue.	8 2	Moon at apogee (406 228 km)		
Wed.	9			
Thu.	10	Mercury at aphelion		
	10 52	New Moon (lunation 1218)		
		Annular Solar Eclipse (p. 130)		
	13 54	Algol at minimum		
Fri.	11 1	Mercury in inferior conjunction		
Sat.	12	Venus at perihelion		
	7	Venus 1.5° S of Moon		
Sun.	13 10 43	Algol at minimum		
	20	Mars 3° S of Moon		
Mon.	14			
Tue.	15			
Wed.	16 7 32	Algol at minimum		
Thu.	17			
Fri.	18 3 54	First quarter		
Sat.	19 4 21	Algol at minimum		
Sun.	20			
Mon.	21 3 32	Solstice		
	5	Jupiter stationary		
Tue.	22 1 10	Algol at minimum		
	23	Mercury stationary		
Wed.	23 10	Moon at perigee (359 956 km)		
	20	Mars in Beehive (M44)		
Thu.	24 18 39	Full Moon		
	21 59	Algol at minimum		
Fri.	25			
Sat.	26 10	Neptune stationary		
Sun.	27 9	Saturn 4° N of Moon		
	18 48	Algol at minimum		
Mon.	28 19	Jupiter 4° N of Moon		
Tue.	29			
Wed.	30	Mercury at greatest heliocentric lat. S		
	15 37	Algol at minimum		

†Azores, Canary Is., N & E Canada, Greenland, NW half of Europe, N & C Russia, N Mongolia



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

There are only 8 weeks to go before SSSP 2021. It has been difficult to plan around a constantly changing COVID-19 situation, but we are trying to give our attendees the best star party under the circumstances.

The Saskatchewan government has developed a "Re-Open Saskatchewan" plan with five phases of "re-opening". We don't know where we will be as of August as much will depend on vaccination and incidence rates. Our programming will have to be flexible to allow for different levels of restrictions. We hope to be able to give one or two evening clinics and perhaps some formal presentations early in the evenings at Civil Twilight to allow for projections on the side of our Registration tent. Watch our website for details on these developments.

We are in the unusual situation of having ALL of our 122 allocated camping sites in the Meadows Campground reserved for this year, with a Camping Waiting List. The Park management has agreed to let SSSP also use the Dark Sky Campground (DSC) adjacent to the Meadows. The 16 DSC sites are non-electric but they do have picnic tables and BBQ

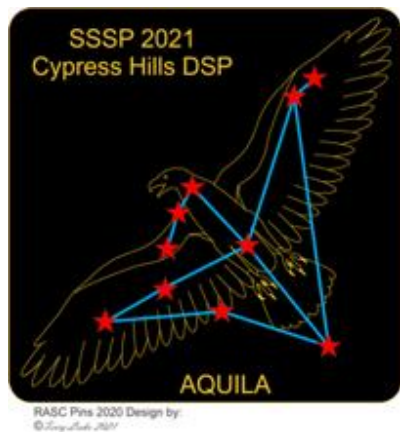
stands. We will be suggesting to those who would rather tent but have reserved Meadows sites not suitable for tenting to take one of the DSC sites. This could potentially open up 16 sites for RVs in the south-west loop of the Meadows. Check our website for new developments.

As of May 24, all unreserved SSSP rooms have been returned to the Resort at Cypress Hills. Those still intending to come and use the Resort will now have to book directly through the Resort front desk. There is no guarantee that any rooms will be available. Those who will be using the Resort restaurant for meals during SSSP should note that the restaurant will be open, but with reservations recommended for breakfast and lunch and required for supper. There will be other places to eat in the park as well.

We hope that many Saskatoon Centre members will attend SSSP this year. As always, we will need volunteers to run the show so we would really appreciate your help to make this very special SSSP a success. See you there!

Contact us at sssp.sk@sasktel.net or call Rick Huziak at 306-280-1899 (cell) or Les Dickson at 306-270-9184 (cell).

SSSP website: <https://sssp.saskatoon.rasc.ca/>





Comet NEOWISE with the aurora taken by Tara Magee

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>