

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 – Les Dickson

Vice-President – Brent Burlingham

Secretary – Tenho Tuomi

Treasurer – *vacant*

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

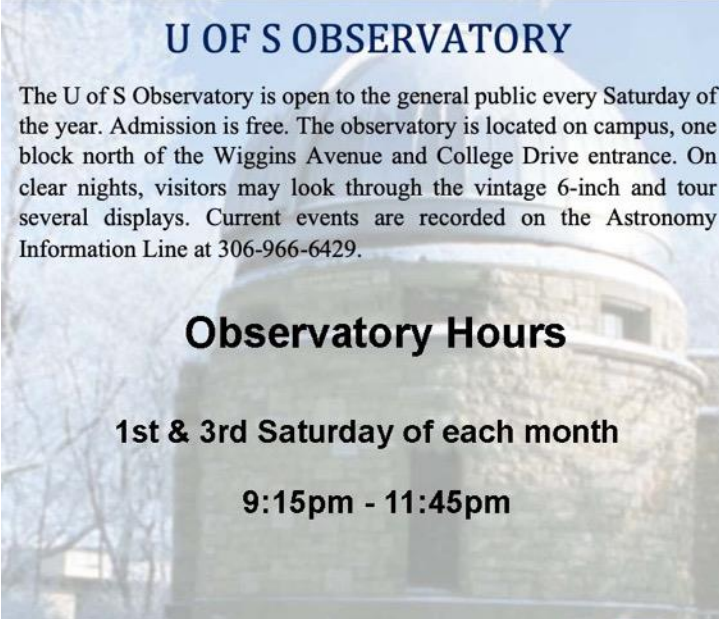
Copy & Collate – Les & Ellen Dickson

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

April 15	Observer's Group - Sleaford Observatory	Brent Gratias
April 17	RASC Saskatoon Centre General Meeting	Les Dickson

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>

April RASC General Meeting

for all members and guests

Join us on April 17th, 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

“Green Laser Pointer Safety and Certification” - Pierre Schierle

(Write-up below)

SPEAKER FOR APRIL MEETING

“Green Laser Pointer Safety and Certification”



Just how bright are Green Laser Pointers (GLPs) and are they dangerous? Join Pierre to learn some brightness comparisons that will help you understand why GLPs are regulated by both Health Canada and Transport Canada. Pierre will simplify these regulations and help you know if your GLP is legal. He will teach you how to safely operate your GLP so you can avoid severe fines or jail time. RASC has obtained a special Authorization for GLP usage. Pierre will teach you the requirements and provide a certification test for RASC members.

Biography

Pierre Schierle has been drawn to the night sky since he was a child longing for the “balloon” floating high above. As a teenager he would drive out onto a grid road south of Regina and gaze for hours at the constellations and the Milky Way. But his obsession with astronomy waited until he had his own children. Now he especially enjoys public outreach, teaching the constellations, and showing people their first glimpse of deep sky objects. He is also an active presenter and mentor for a broad range of topics useful to budding stargazers.



M45 Pleiades Constellation taken by Tammy Vallee with a Canon 6D MKII through Tenho's 80mm refractor

MINUTES OF MARCH MEETINGS

Tenho Tuomi

Minutes of the Monthly Director/Executive Meeting RASC Saskatoon Centre Monday, March 20, 2023 - 7:05 pm Online (ZOOM)

Attending: Les Dickson, Tenho Tuomi, Darrell Chatfield, James Wood, Yannis Pahatourogrou, Brent Burlingham, Norma Jensen, Daryl Janzen, Rick Huziak, Jim Gorkoff, Cam McLelland and one other.

1. **Call to order** 7:05 pm – Les Dickson (Acting Chair)
2. **Appointment of Recording Secretary** – Tenho Tuomi
3. **Approval of the February Executive meeting minutes** as circulated in the March newsletter. **Moved:** Les Dickson. **Seconded:** Darrel Chatfield. **CARRIED.**
4. **Call for additional announcements/items** to add to agenda - none
5. **Announcement from the Chair – Les Dickson** – issues since the last meeting
 - Resignation of Vice-President – Brent Burlingham
 - Resignation of Treasurer – Donna-Lee May
 - Resignation of Secretary – Rick Huziak
 - only one signing officer left
 - Reports to Non-profit Corporations Branch of Saskatchewan incomplete for 2021 and 2022
 - Board of Directors met March 5 and March 13 to deal with these issues.
6. **Reports from the Board of Directors** – Les Dickson, Jim Wood, Tenho Tuomi, Norma Jensen
 - 6.1 Presentation and discussion of meetings of March 5 and 13, 2023
 - 6.2 Current status of Centre with Province – by Jim Gorkoff
 - Registration will not be lost even if reports are incomplete but reports should be sent for other reasons
 - Les Dickson and Jim Gorkoff will file missing reports with the Corporations Branch.
 - We are under two regulations, RASC National to use the RASC name, and Sask Corporations
 - Jim explained our governance structure of Directors and Officers (Executive)
 - 6.3 Plan to move forward – New bylaws are needed to come in line with new regulations

7. **Moved** by Les Dickson and seconded by James Wood that the following be appointed as officers of the Centre.
 - President – Les Dickson
 - Vice-President – Brent Burlingham
 - Secretary – Tenho Tuomi**CARRIED.**

8. **Moved** by Tenho Tuomi and seconded by Yannis Pahatouroglou that the signing officers for the Saskatoon Centre of the RASC be any two of Norma Jensen, Les Dickson and James Wood. **CARRIED.**
(Note – may have to amend this in April when new treasurer appointed)

9. **Sleaford Report** – Darrel Chatfield
 - Gate broken, needs welding
 - Re-keying on hold
 - camera and security discussed

10. **SSSP Report** – Les Dickson
 - Registration starts April 8
 - Alan Dyer will be main speaker
 - New park rule – five day flat camping charge.

11. **Notice of return to in-person meetings starting April 17**

12. **Motion to adjourn. Moved: Les Dickson. 7:57 PM**

**Minutes of the Monthly General Meeting of RASC Saskatoon Centre
Monday, March 20, 2023 - 8:00 pm Online (ZOOM)**

16 members on-line at beginning of meeting.

1. **Sharing / Networking Time** 8:00 PM – all members
2. **Call to order** – 8:15 PM – Les Dickson (Acting Chair)
3. **Call for additional items or changes to the agenda** - none
4. **Call out to new members/guests:** - none
5. **Adoption of the February General Meeting minutes** as circulated in the March newsletter. **Moved:** Ellen Dickson. **Seconded:** Grant Ursaki. **CARRIED.**

6. **Executive Meeting summary** – Les Dickson
7. **Notice of return to in-person meetings starting April 17**
8. **Program:**
 - *What's Up This Month* – Colin Chatfield
 - *Main Speaker* – Alister Ling, Edmonton Centre, **Better than Clear Sky Chart and Astrospheric: AstroWeather Tips, Tricks, and sucker holes** - Retired operational weather forecaster from Environment Canada.
9. **Call to adjourn** – 9:54 **Moved: Les Dickson. CARRIED.**

MINUTES OF SPECIAL EXECUTIVE MEETING

Tenho Tuomi

Minutes of the Special Director/Executive Meeting RASC Saskatoon Centre Monday, April 3, 2023 - 7:30 pm Online (ZOOM)

Attending: Les Dickson, Tenho Tuomi, James Wood, Yannis Pahatouroglou, Brent Burlingham, Norma Jensen, Mark De Jong, Colin Chatfield.

1. **Call to order** 7:30 pm – Les Dickson (President), secretary – Tenho Tuomi
2. **Moved** by Leslie Dickson, seconded by Yannis Pahatouroglou, that the motion of March 20, 2023, reading “Moved by Tenho Tuomi and seconded by Yannis Pahatouroglou that the signing officers for the Saskatoon Centre of the RASC be any two of Norma Jensen, Les Dickson and James Wood”, be rescinded. **CARRIED.**
3. **Moved** by Leslie Dickson, seconded by Mark De Jong, that the signing officers for the Saskatoon Centre of the RASC be any two of Norma Jensen, Leslie Dickson and Brent Burlingham. **CARRIED.**
4. **Motion to adjourn. Moved:** Les Dickson. 7:48 PM

NOTES FROM THE PRESIDENT

Les Dickson

The Saskatoon Centre has gone through some rough patches in the past, and we have weathered them. With the help of some of our dedicated members, we will get through our current rough patch. I stepped up to be President in March because I did not want our Centre to fold due to apathy and bad feelings. I appreciate the efforts of the Board of Directors and some concerned members of our Centre who have worked hard to put the Centre back on stable ground and prepare to get us through to the fall elections.

I am pleased to say that by the April meeting we will have the financial report required to submit to Corporate to maintain our registration with the Saskatchewan Government. My thanks to Donna-Lee May for preparing the report and for Jim Gorkoff for preparing the submission to Corporate.

Our Executive is currently missing a Treasurer. For the time being, the financial functions are being covered by myself with the help of Jim Gorkoff. This makes me a very busy man as I am also Representative to National Council and Chair of the SSSP Organizing committee. It is a priority for the Board of Directors and the current Executive to find a suitable candidate to fill the Treasurer's position.

A major outstanding issue within our Centre has been the lack of updated by-laws and policies that are aligned with recent changes in the Non-Profit Corporations Act and Regulations recently brought into force in 2023, and the current version of the by-laws of the Royal Astronomical Society of Canada. Jim Gorkoff and I have formed a committee to draft the first version of the new by-laws that will then go to the Board and Directors and Executive for review and modification as required. It is intended to have the new by-laws and policies ready for review and approval by the fall General Meeting.

Many years ago, when Ron Waldron was President, he said something profound that stayed with me ever since. Paraphrasing from my faulty memory, he said: "When dealing with challenges, do not say 'We should...', say 'I will...'". As we face new challenges, I hope our members will come with constructive, positive ideas and say "I will". It is time we moved past these difficulties and started to enjoy and promote the hobby of astronomy again as we were meant to do.

SASKATCHEWAN SUMMER STAR PARTY 2023

Les Dickson - SSSP 2023 Organizing Committee Chair

Another year has passed and another SSSP is underway.

SSSP is being held August 16 to 20, 2023 at the Cypress Hills Dark-sky Preserve and Interprovincial Park south of Maple Creek, Saskatchewan. This star party is a joint effort of the Saskatoon and Regina Centres of the RASC and of dozens of volunteers who step up to plan, organize and run this popular event. I wish to thank those who make up the core of our planning and organizing committee in addition to myself: George Charpentier, Ellen Dickson, Greg Fusick, Brent Harrold, Rick Huziak, and Andrew Kostiuk from Saskatoon, and Vance Petriew and Pierre Schierle from Regina.

Attendees have a choice of camping either in the Meadows Campground, where most of the activities and observing takes place, or in the Dark-sky Campground. One can also stay in the Resort which offers a mix of hotel rooms, condos and cabins.

Rick Huziak had the lion's share of the efforts this past week as registration and camping reservations opened on April 8. As of the afternoon of April 9, we had about 75% of the 102 available Meadows campsites reserved. We also have taken about 12 early registrations. We expect over 150 registrations totalling over 300 people by opening day. Early registration ends on July 15th.

We are presenting the usual mix of daytime talks, daytime and evening clinics, BBQ, banquet, Kid's program, socializing and observing. We are pleased to announce our Fr. Lucien Kemble speaker: our good friend Alan Dyer. Pierre Schierle will be presenting a seminar on "Green Laser Pointer Safety and Certification". Other guests will be announced once arrangements have been finalized.

Shirts, pins, patches and other merchandise will be on-sale at SSSP. The shirt logo was designed by Vance Petriew (shown above). The shirt colour will be burgundy. The pin will be based on the shirt logo design. Patches with the logo will also be available.

Check out our website often for updates, especially in the next few weeks as final arrangements are being made. You can find us at <https://sssp.saskatoon.rasc.ca/>. For more information, contact us at either sssp.sk@sasktel.net or by calling Les Dickson at his cell number 306-270-9184 .



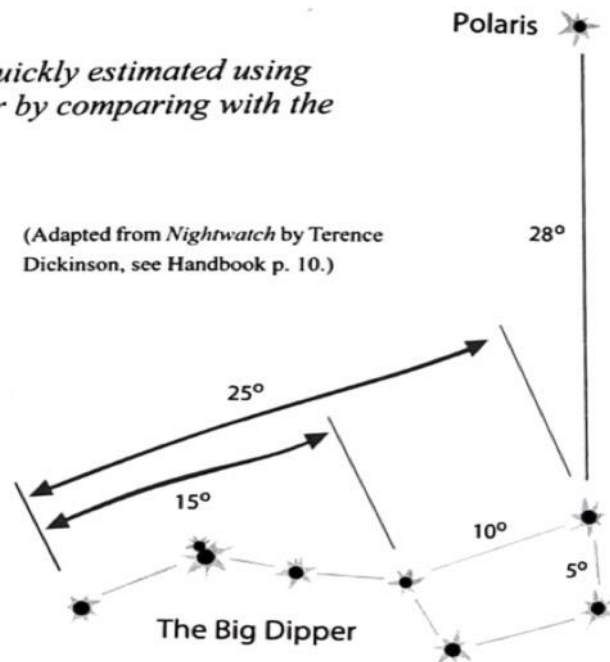
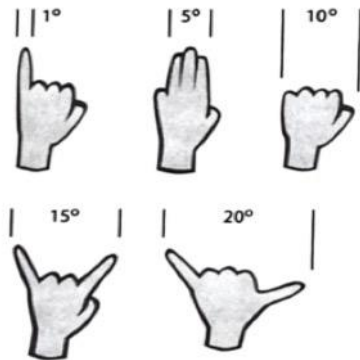
APRIL NIGHT SKY EVENTS AND INFO


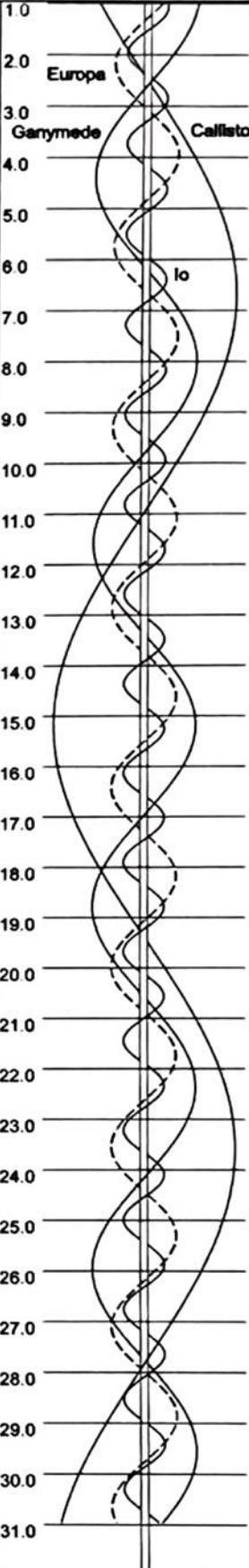
















Images on the next few pages taken, with permission, from the 2023 Observer's Handbook. It can be obtained by joining the RASC here <http://rasc.ca/join> or ordered from <https://secure.rasc.ca/Portal/Shop/RASC/Store/StoreMain.aspx?Category=CURRPUB>

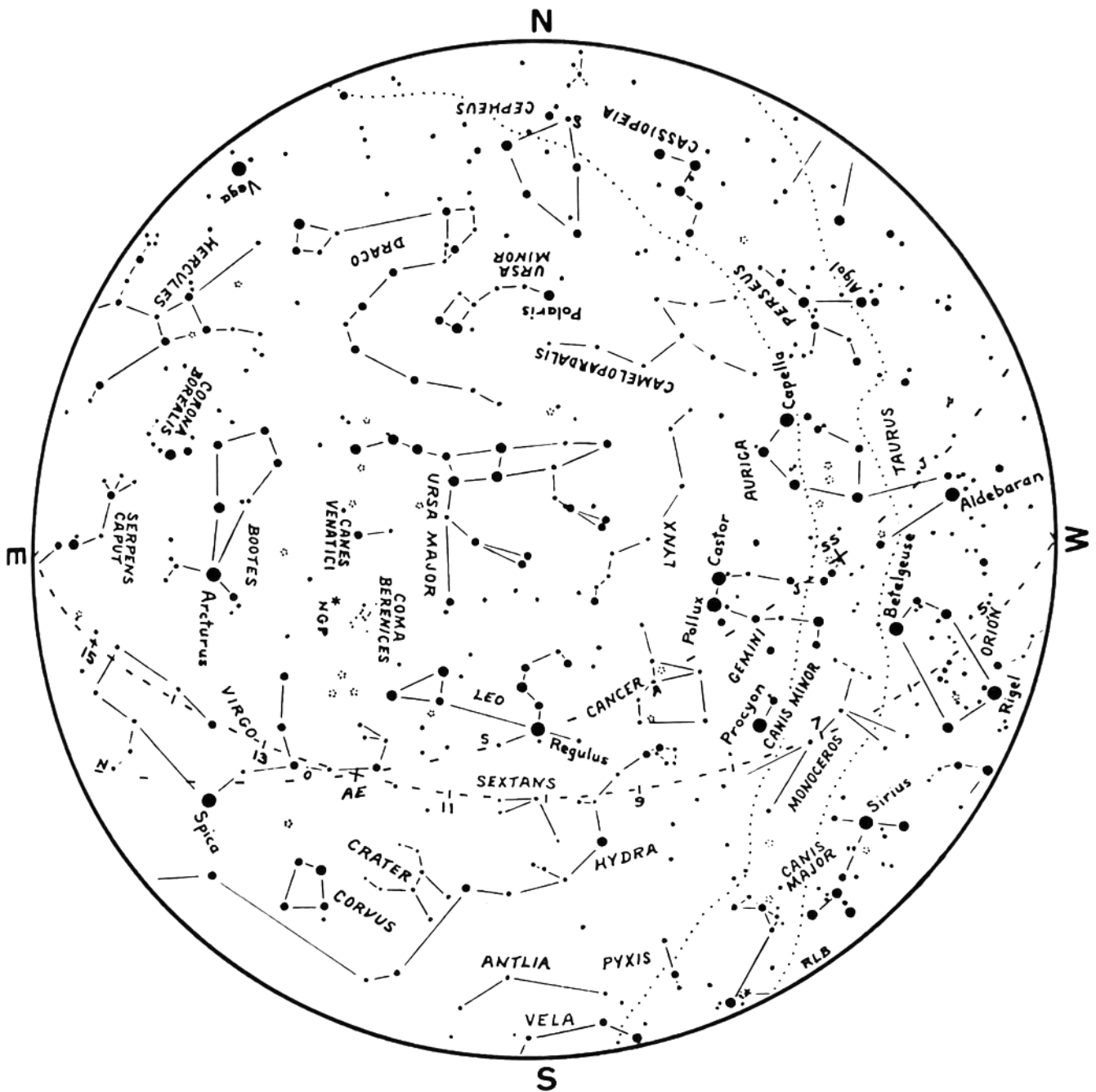
HANDY SKY MEASURES

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)		APRIL EVENTS	Jupiter's Satellites	
d	h m		West	East
Sat.	1 0 54	Algol at minimum		
Sun.	2			
Mon.	3 21 43	Algol at minimum		
Tue.	4			
Wed.	5			
Thu.	6 4 34	full Moon		
	18 32	Algol at minimum		
Fri.	7 13 51	Moon at descending node		
Sat.	8			
Sun.	9 15 21	Algol at minimum		
Mon.	10 6	Antares 1.5° S of Moon		
Tue.	11	Mercury at greatest heliocentric lat. N		
	22	Jupiter in conjunction with the Sun		
	22	Mercury greatest elongation E (19°)		
Wed.	12 12 10	Algol at minimum		
Thu.	13 9 11	last quarter		
Fri.	14			
Sat.	15 8 59	Algol at minimum		
Sun.	16 2	Moon at perigee (367 968 km)		
	4	Saturn 3° N of Moon		
Mon.	17	Venus at perihelion		
	17	Neptune 2° N of Moon		
Tue.	18 5 48	Algol at minimum		
Wed.	19			
Thu.	20 4 12	new Moon (lunation 1241)		
		Annular-Total Solar Eclipse (p. 126)		
	11 32	Moon at ascending node		
Fri.	21 2 37	Algol at minimum		
	7	Mercury 1.9° N of Moon		
	13	Uranus 1.7° S of Moon		
	16	Mercury stationary		
Sat.	22	Mars at greatest heliocentric lat. N		
	10	Moon 1.8° S of Pleiades (M45)		
Sun.	23 1	Lyrid meteors peak		
	13	Venus 1.3° S of Moon		
	23 26	Algol at minimum		
Mon.	24 9	Vesta in conjunction with the Sun		
Tue.	25			
Wed.	26 2	Mars 3° S of Moon		
	18	Pollux 1.5° N of Moon		
	20 15	Algol at minimum		
Thu.	27 21 20	first quarter		
Fri.	28 7	Moon at apogee (404 299 km)		
Sat.	29 17 04	Algol at minimum		
Sun.	30			



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.

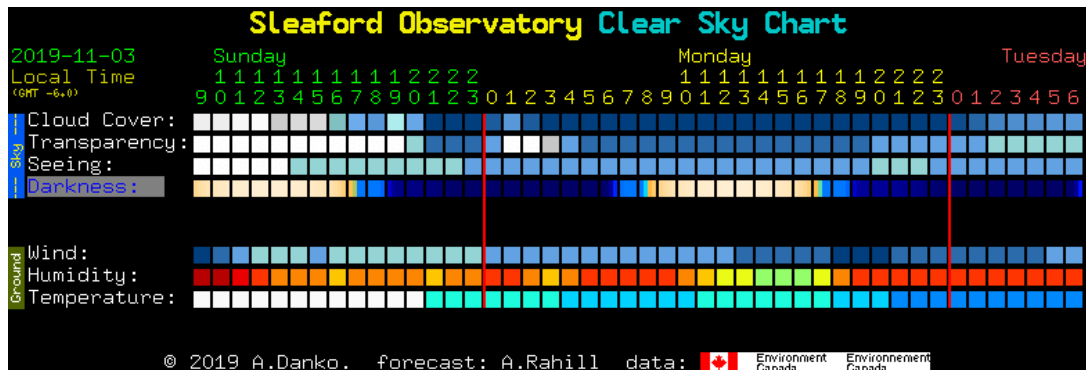
Please contact the Treasurer with any inquiries.

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

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



Aurora on March 23. 2 second exposure with a 10mm lens at ISO 3200. Taken by Tenho Tuomi.



*Aurora on March 23. Venus and the Moon in this picture.
2 second exposure with a 10mm lens at ISO 3200. 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 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	102
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>