

# Saskatoon Skies

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

Volume 52, Number 10

November 2021



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](mailto: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** – Ron Waldron

**Vice-President** – Mike Dolan

**Secretary** – Rick Huziak

**Treasurer** – Donna-Lee May

**National Council Rep** – Les Dickson

Canadian Tire money - Darrell Chatfield

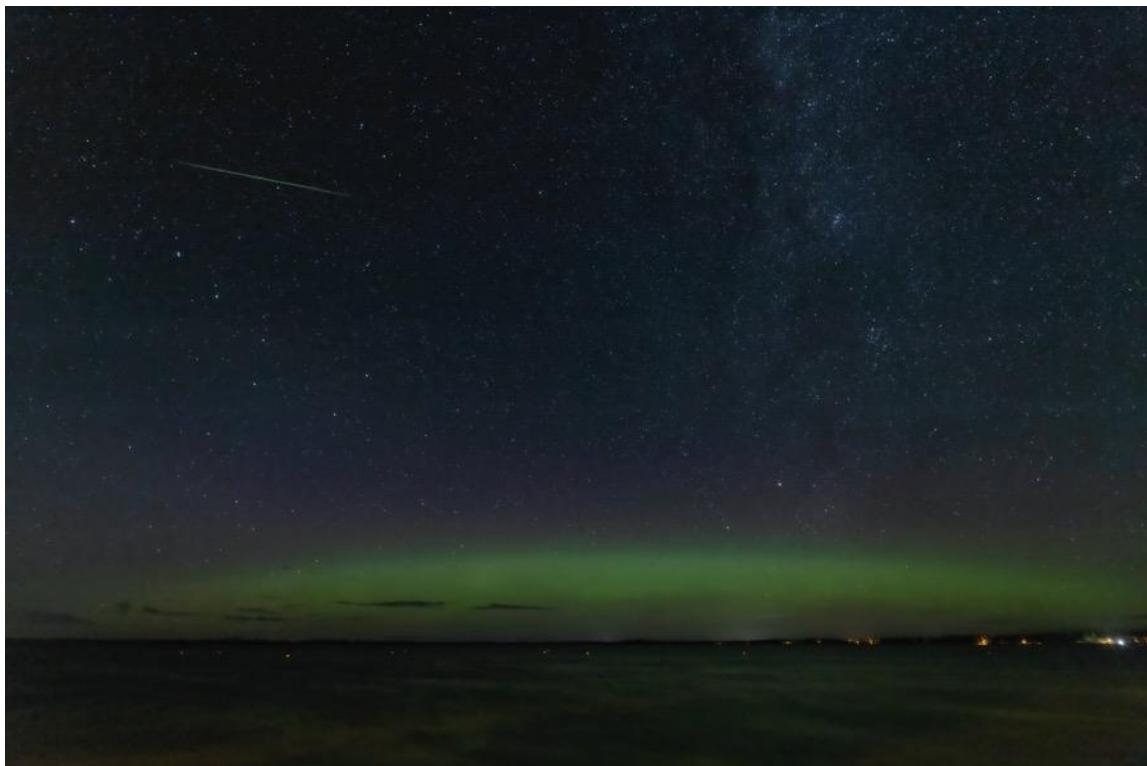
If you cannot attend a meeting but would like to donate your Canadian Tire money please email Darrell at [novachat@sasktel.net](mailto:novachat@sasktel.net).

## NEWSLETTER INFO

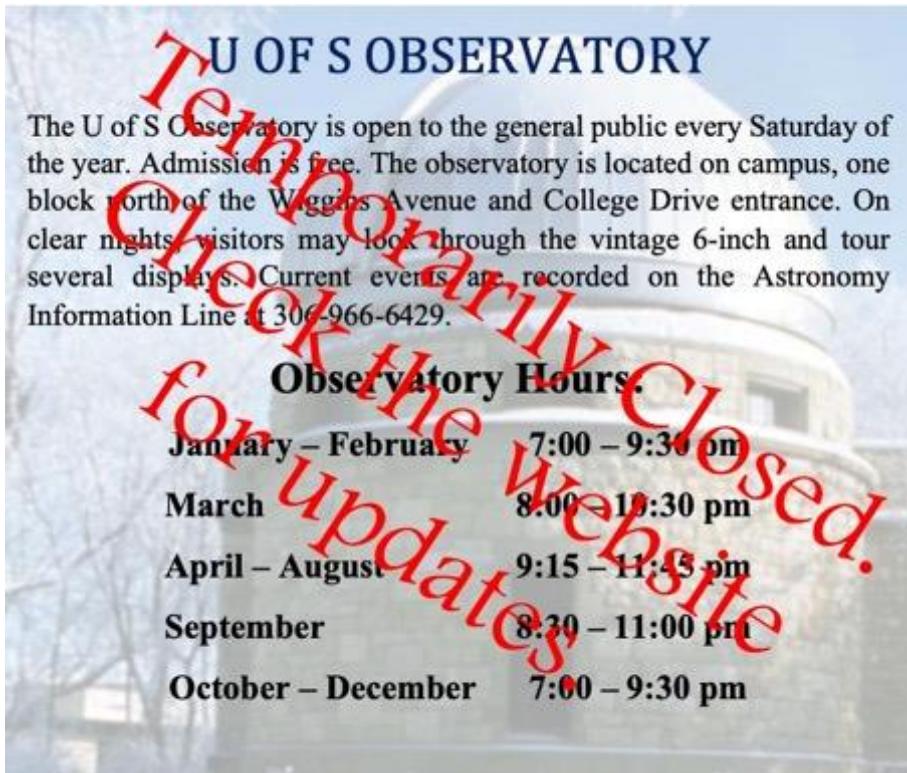
**Newsletter Editor** – Colin Chatfield  
**Copy & Collate** – Les & Ellen Dickson  
**Labels & Temps** – Mark de Jong  
**Web Posting** – Gord Sarty

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](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.



*Taken September 12, 2021 by Tammy Vallee at Madge Lake.  
Canon 6D MKII, 14mm, 7 seconds, f/2.8, ISO 3200*



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

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



*Two image panorama of the aurora over the Northeast Swale.  
Taken November 4<sup>th</sup>, 2021 around 5:00am, by Tara Magee*

# RASC CALENDAR OF EVENTS & MEETING INFO

**Nov 15<sup>th</sup>**

**RASC General Meeting - 8:00pm (info below)**

Mike Dolan

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>

## November RASC General Meeting for all members and guests

**Join us on November 15th, 2021 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 - **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.

**8:30pm - Main Program -**

**Main speaker to be determined**

**Colin Chatfield & Tara Magee “What’s up this month”**

## SPEAKERS FOR MEETINGS

Rick Huziak

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

## OCTOBER OBSERVING

Tenho Tuomi



Comet 29P/Schwassmann-Wachmann has a 14.7 year circular orbit beyond Jupiter's orbit. It has about seven outbursts each year that increase its brightness by many magnitudes. It had a major outburst at the end of September and was still bright when I took this picture on October 31.

I photographed NGC 7000, the North America Nebula, and IC 5070 (the Pelican Nebula), on October 26 with my Canon T5i camera and Sky-Watcher Equinox-80 ED APO telescope, nine two-minute pictures stacked with DeepSkyStacker and processed with Paint Shop Pro.



I photographed IC 1318, the Butterfly Nebula, and dark nebula LDN 889 on October 31 with my Canon T5i camera and Sky-Watcher Equinox-80 ED APO telescope, four five-minute pictures stacked with DeepSkyStacker and processed with Paint Shop Pro.

# OBSERVERS GROUP COORDINATOR(S) NEEDED

Larry Scott

The Saskatoon Centre of the RASC is seeking one or more volunteers to take over the Observers Group Coordinator/Yard Monkey position currently held by me (Larry Scott). This position has many perks - fresh air and exercise in beautiful surroundings; works in close proximity to many bird species, butterflies, racoons, deer and gophers; the appreciation of your fellow club members; free parking; and more! Below is a list of opportunities for energetic club members that need to be passed on or not as the club sees fit.

If possible I would continue doing this for years but I'm planning a move in a few years and simply won't be here. My hope is to give the club time to consider its options and that I can pass on some tips to whomever(?) comes next.

## Observers Group Coordinator

- Set schedule for Observers Group based on dark skies(new moon) and not on a long weekend.  
(Also Messier Marathon)
- Interpret weather reports to base a go/no go decision the day of Observers Group and notify club members.

## Yard maintenance

- Mow grass or blow snow as required so yard is useful and combustibles near buildings are kept to a minimum.
- Care and feeding of snow blower and lawn mowers. \*\*\*Important\*\*\*

## Key Master

- Give tours of Sleaford to club members and hand out keys to the kingdom.

## Sleaford Open House

- |                      |                            |
|----------------------|----------------------------|
| - Set a date         | - Nag George for posters.  |
| - Distribute posters | - Nag everyone to show up. |

Starting in 2006 I began hosting Observer's Group meetings and as the years went on I accumulated some other responsibilities as listed above. Not sure if everything will be picked up by the members but I am hoping someone will step up to host the Observers Group and assist with these other responsibilities. Cheers for now, hope to see some of you out at Sleaford before I'm gone.

## PRESIDENT'S MESSAGE

Mike Dolan

I want to express my appreciation to the membership for appointing me to the office of President; it is an honor and my pleasure to take on this responsibility. My goals will be to improve on what has already been established success and with your help continue to grow and try to finish up some projects that I feel will make Saskatoon Centre even better.

As most of you probably know, I am a relative newcomer to the club and to astronomy as well. Let me tell you a bit about myself.

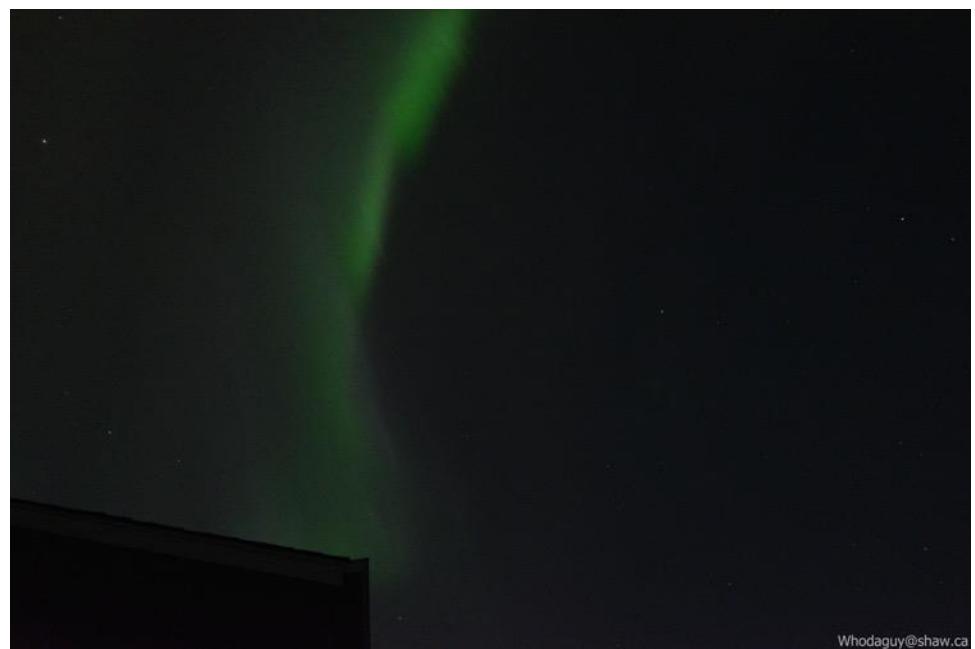
I was born and raised in Honolulu, Hawaii in the early 1950's and grew up in a true paradise. Surfing, baseball, football soccer all year round mixed in with grade school High School, rock bands, working, traveling and six years of University. There was no rule that said you have to get your bachelors in four, I just so happened to like campus life in Hawaii. After graduation from University with a B.A. in Administration I put my higher education to good use; I became a mason/concrete finisher for my oldest brother's construction company. After a minor injury, I found employment as a Mechanical Supervisor for Dole Pineapple Co. in the Can Manufacturing division. That lasted for almost 10 years during which I married my wife Darlene, who is from Saskatoon. In 1987 when we found out she was expecting our first child we decided to pack up and move to Saskatoon – "Why not?" I said "I've done crazier things" like fly in a helicopter and hover over an active lava pool, or scuba dive to almost 100 feet underwater! Now in 2021 I'm the president of the RASC Saskatoon Centre. What have I gotten myself into this time?

These will be my goals in my two-year tenure as your president:

Firstly, our Centre has a beautiful working 16" Meade telescope, fresh out of the repair shop, polished up and ready to go. It will be my goal to see that it gets installed and made operational at the Sleaford Observatory for those who wish to learn how to use it. We have the start of a working committee to see that this project gets done and will continue to see it through to completion, possibly by next summer.

Next, to see that the Constitution/By-Law committee is given the help and resources it needs to come up with a working copy of an updated constitution and by-laws. This in itself is no easy task but I have confidence that our committee will see it through and get the job done.

Finally, an organization like ours is a participation activity, without active member participation then we have no club. I ask all members to think about how they can help and participate to make RASC Saskatoon Centre a better club. There are a couple of vacancies that need to be filled, as well as, committees that could use assistance. All that is needed is participation. At the next meeting feel free to speak up and voice an opinion and join in. Participate....



*From Mike, “I was up at 2:30am that morning (Nov. 4<sup>th</sup>) struggling to get some pictures, and finally the last wave of the aurora hit around 6:30 and I got a couple of presentable pictures.”*

# NARROWBAND IMAGING

Tim Yaworski & Jeff Swick

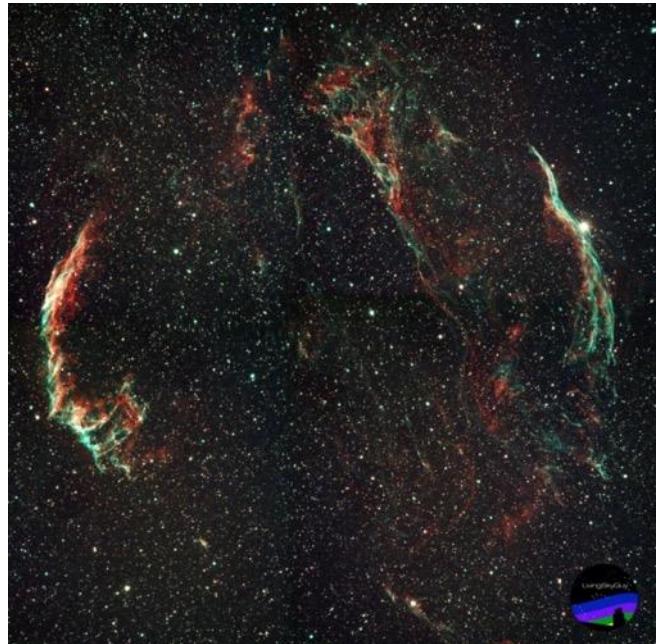
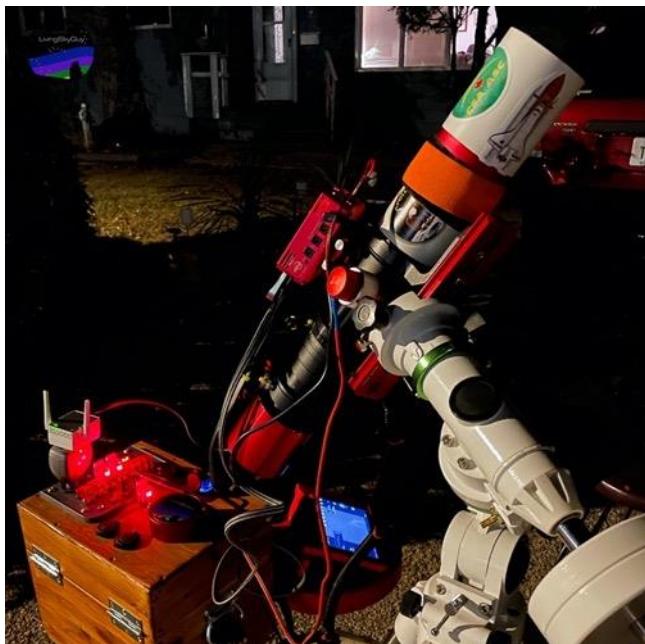
Recently Tim Yaworski has been shooting deep-sky objects from his very light polluted front yard with the aid of a dual narrowband filter. This four pane mosaic of the Veil Nebula is one example of the type of results he has been getting with this equipment:

William Optics Zenithstar 61 refractor

ZWO ASI533 camera with Optolong L-Extreme filter

Skywatcher EQ35 Pro mount

80x 180secs guided by ASIair Pro



Tim has also recently done a video for RASC National about the upcoming eclipse. The video can be seen on YouTube here:

<https://youtu.be/62TVdZYP6fA>



*Jeff Swick and Tim Yaworski setup the inaugural “Narrowband Imaging Night” at Sleaford on November 5. Nine members and potential new members attended.*

### Imaging Group Report - Jeff Swick

Well our centre held its first unofficial imaging night out at Sleaford on Nov 5th. I expected it was just going to be Tim Yaworski and I, but we ended up with 8 imagers. Tim and I set up before dusk and then Tim fired up his drone; what a great little device.

Tim has built himself his own portable power that he set up to run two rigs. The weather was very nice for November, in fact when I got home at 5:00 a.m. the temperature was only 0 degrees (it was colder when I got up around noon at minus 2). There was a bit of a breeze that died off when the sun went down but an awful lot of moisture in the air, so yay for the dew heaters and all the gear boxes were covered in a thin layer of ice. The stairs to the warm up shelter were incredibly slippery so if you are out there, it's something to keep in mind.

Tim mentioned we might have company for the evening and sure enough at dusk people started arriving and almost everyone set up in the dark. I could tell they were all familiar with their equipment as everyone got set up quickly and efficiently. You could tell they were familiar with their gear. With so many imagers and their gear we had AC power cords on the ground but we generally ran the cords beside each other so as to reduce the trip hazard. We eventually ran out of AC outlets, so Tyler had to set up on the west side of the shelter up by the school house.

There was some very nice aurora and a couple of the folks took some time lapse that turned out well . It was the Taurid meteor shower and we saw several. I saw one photo that Tim captured of a meteor going into the aurora to the north and then the next day I spotted a photo that aurora photographer Tara Magee took of what I am pretty sure was the same meteor heading into the aurora but Ms. Magee was about 40 kilometres away. Even the rayed arcs in their photographs were the same. It's hard enough to capture a meteor photographically let alone having two imagers far from each other to catch the same one. Hopefully they will both submit their photographs this month and you can be the judge.

My personal highlights of the night as well was meeting all the other new folks, and meeting Tim in person for the first time, as we have often communicated online, and watching his drone in action was fun. The other bonus for me was an experiment that Daryl Janzen and I tried. He was at his desk in Saskatoon and shot a short video clip of us. The benefit of this for me was personally knowing that if I am out there alone it's comforting to know that people could spot you in an emergency. My personal imaging highlight that night was the Horsehead Nebula in Orion; a target I can't see from my place with no southern exposure due to trees. As it was new Moon, I elected to just use my Celestron LP filter on the RASA and set a series of 5 minute exposures. I still haven't downloaded my data but did watch them come off of the camera on my iPad from inside the warm up shelter. I was floored as the first image came in via Bluetooth. I've included a photo of that moment here. Fair to say that it knocked my socks off.



As the students were using the robotic scopes for their labs, and as such, we were very careful not to spoil their work. One thing I noticed is that with all the gear, there was a lot of green and red power indicators. This would not work well for Observers' Night, so that is why we keep it separate but for us and it was fine. It's just too bad we didn't have more AC outlets so that we could all be set up together, as half the fun is the visiting. I learned from Lori Tedford that this was her first time out at

Sleaford, as they usually image from Blackstrap and nap in their vehicle, and didn't feel all that safe. so her and her husband were happy about our facilities. Having the washroom (heated at that) was the best bonus.

Thanks to everyone who came out. It was so nice to meet you all and I look forward to seeing you again. I might also consider hosting an imaging night here in the city with narrow band filters. I encourage you all join our Centre's Facebook group

([www.facebook.com/groups/rascssaskatoon](http://www.facebook.com/groups/rascssaskatoon)), as it's a nice way to carry us through between meetings. Speaking of which, Tim and I have come up with a couple of multimedia ideas for our monthly meetings. The delay of course is fleshing out the bones of the ideas and gathering content.



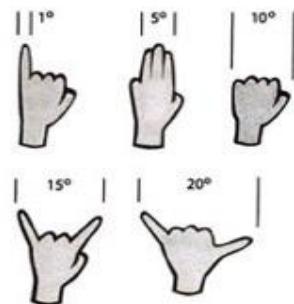
Also, I would like to add that imaging night is not just for imagers. If you want a night out under the stars, by all means, join us. This would also be ideal for new members and a good time to practice setting up your new equipment. There is plenty of experienced advice and assistance on offer and each and every one of us knows the frustration that can come when setting your rig up for the first few times in the dark.

## NOVEMBER NIGHT SKY EVENTS AND INFO

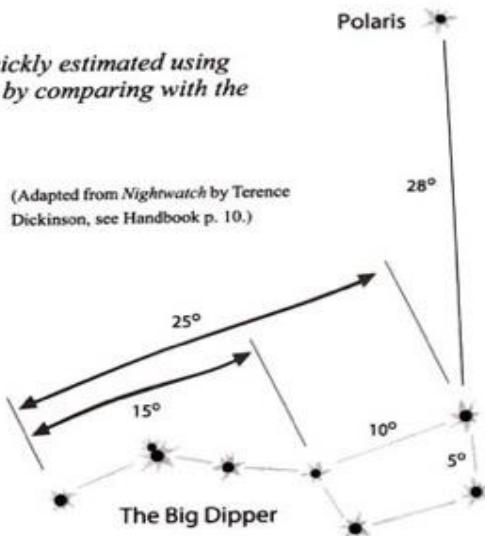
Images on the next few pages taken with permission from the 2021 Observer's Handbook. It can be obtained by joining the RASC here <http://rasc.ca/join> or ordered from <https://secure.rasc.ca/Portal/Shop/RASC/StoreMain.aspx?Category=CURRPUB>

### HANDY SKY MEASURES

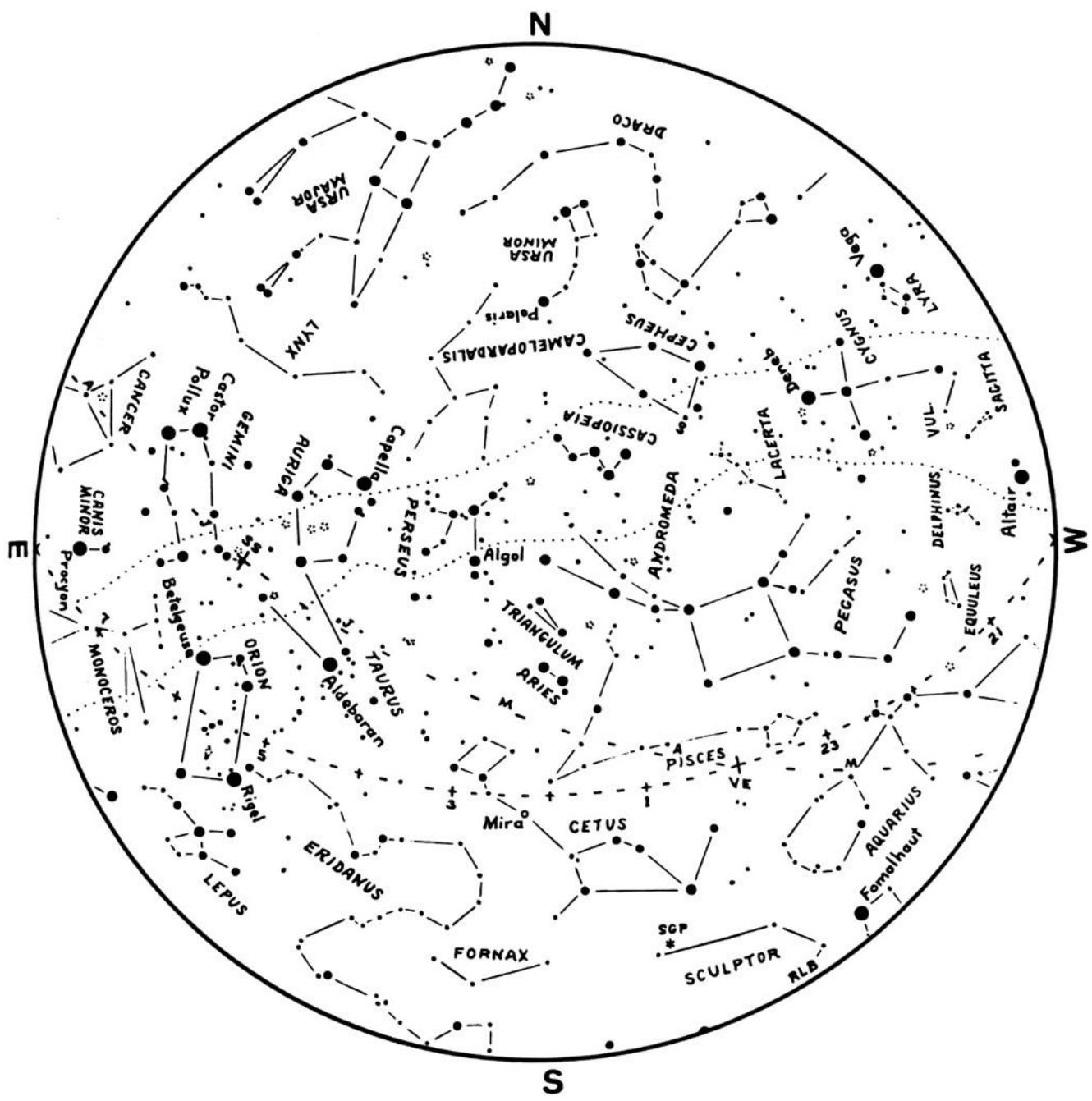
*Angular measure in the sky can be quickly estimated using the fingers of an outstretched arm, or by comparing with the star separations in the Big Dipper.*



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



Time (UT) d h m			NOVEMBER EVENTS	Jupiter's Satellites West East
Mon. 1	2		Pallas stationary	
Tue. 2				
Wed. 3	0 22		<b>Double shadow transit on Jupiter</b>	
	19		<b>Mercury 1.2° S of Moon, occultation†</b>	
	19 33		Algol at minimum	
Thu. 4	21 14		<b>New Moon (lunation 1223)</b>	
Fri. 5	0		<b>Uranus at opposition</b>	
	12		S. Taurid meteors peak	
	22		Moon at perigee (358 843 km) <b>Large tides</b>	
Sat. 6	16 22		Algol at minimum	
Sun. 7			<b>DAYLIGHT SAVING TIME ENDS</b>	
Mon. 8	5		<b>Venus 1.1° S of Moon, occultation ‡</b>	
Tue. 9	13 11		Algol at minimum	
Wed. 10	4		Mercury 1.1° N of Mars	
	14		Saturn 4° N of Moon	
Thu. 11	12 46		<b>First quarter</b>	
	17		Jupiter 4° N of Moon	
Fri. 12	10 00		Algol at minimum	
	11		N. Taurid meteors peak	
Sat. 13				
Sun. 14				
Mon. 15	6 49		Algol at minimum	
Tue. 16				
Wed. 17	18		Leonid meteors peak	
Thu. 18	2		Uranus 1.5° N of Moon	
	3 38		Algol at minimum	
Fri. 19	8 57		<b>Full Moon</b>	
			Partial Lunar Eclipse (p. 132)	
Sat. 20				
Sun. 21	0 27		Algol at minimum	
	2		Moon at apogee (406 279 km)	
Mon. 22			Mercury at descending node	
	8		<b>Moon 1.8° N of M35</b>	
Tue. 23	21 16		Algol at minimum	
Wed. 24				
Thu. 25				
Fri. 26	18 05		Algol at minimum	
Sat. 27	4		Ceres at opposition	
	12 27		<b>Last quarter</b>	
Sun. 28	10		Vesta in conjunction with the Sun	
Mon. 29	5		Mercury in superior conjunction	
	14 54		Algol at minimum	
Tue. 30				

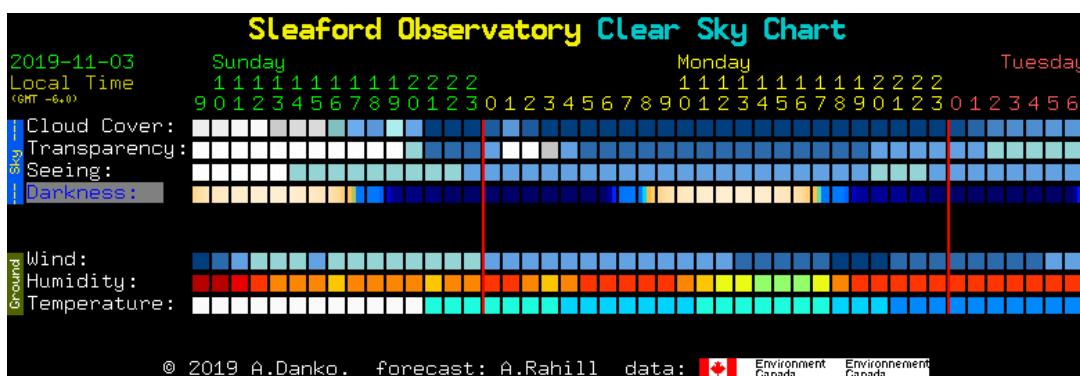


# CLEAR SKY AND WEATHER INFO

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)

## BOOKS 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	(50.00) 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

## RASC 2022 CALENDARS

Donna-Lee May

Donna-Lee May is currently taking orders for the 2022 RASC Calendars. They are \$20 each. Email Donna-Lee at [dlm3star@telus.net](mailto:dlm3star@telus.net). See the RASC website for more info (please note the price on the website doesn't include the shipping cost, etc.):

<https://secure.rasc.ca/store/product/2022-observer-s-calendar>



# MINUTES OF SEPTEMBER & OCTOBER MEETINGS

Rick Huziak

## Minutes of the Executive Meeting - RASC Saskatoon Centre Monday, September 13, 2021 - 7:00 pm Online (ZOOM)

**Attendees (online):** Ron Waldron, Mike Dolan, Mark de Jong, Les Dickson, Ike Thiessen, Donna-Lee May, Rick Huziak, Colin Chatfield, Tara Magee. Later: Cam McLelland, Murray Strankay

1. **Call to order** – Ron Waldron – 7:01 P.M.
2. **Approval of the Executive Minutes** as circulated. **Moved:** Les Dickson. **Seconded:** Donna-Lee May. **CARRIED.**
3. Call for **additional announcements/items** to add to agenda: added Membership List under Old Business; Riding Mower & Binocular Donation under New Business
4. **Old business**
  - **Telescope Rental Program** plans & changes – Ike Thiessen submitted a report to the Executive. Ike will recall telescopes to do an audit of rental telescope accessories. Donna-Lee will set up on-line payment but for now payment to be either cash or cheque payable to RASC.
  - Future location and plans for the refurbished **16-inch telescope** – Ron Waldron - Scope will be moved to observatory shed on September 23 and will be stored. Rick Huziak still needs to buy an 18-volt power supply for the scope.
  - **Membership List Access:** Mark de Jong - New membership list is available from the new National database, but Centre-specific information is missing. Mark is working with National (Adele) to resolve missing information. Les will address the issues during next week's National Council meeting.
5. **New business:**
  - **Treasurer's Report** – Donna-Lee May - no report, but still needs expenses from SSSP sent in.

- **Ordering 2022 RASC Calendars** – Donna-Lee May - See Newsletter announcement - cost is \$20 each. Orders need to be into Donna-Lee by the end of Sept. and she will order sufficient numbers, plus a few.
  - **Sleaford Narrow Band Imaging Proposal** – Ron Waldron on behalf of Jeff Swick: Jeff would like to create a Narrow Band Imaging Group at the Sleaford Observatory. It is suggested that Jeff should write an article for the newsletter with an invitation to others. The Executive welcomes this idea. **Mike Dolan Moved:** To approve use of Sleaford Observatory for the new Narrow Band Imaging Group with Jeff Swick leading the group. **Seconded:** Rick Huziak. **CARRIED** (Unanimous)
  - **Clean-up of the Sleaford site – Sunday, Sept. 26, 2021** - Ron Waldron - Ron - main task is to clean up the shed. Rick Huziak might be able to do other maintenance. (Darrell Chatfield is unable to attend). We are hoping for a crew of about  $\frac{1}{2}$  dozen.
  - Planning for upcoming **Annual General Meeting** – Ron Waldron: Members to contact Ron by [October 1st](#) if they will NOT continue in their position. Need a volunteer for Vice-president..
  - **Proposed purchase of riding mower** for Sleaford from a private sale. Cost is \$800. Needs a new battery and will be taken to *MiniTune* in the spring for a tune-up. **Mike Dolan Moved:** To purchase to mower for \$800 & allocate \$200 for battery & tune-up cost. **Seconded:** Ron Waldron. **CARRIED** (Unanimous). Payment will be by cheque.
  - Carmen Foley (widow of Justice Peter Foley) will **donate 15x70 binoculars** to the Centre - Mike Dolan. A thank you card will be sent by Donna-Lee May.
6. **Call to adjourn.** **Moved:** Ron Waldron. **Seconded:** Donna-Lee May. **CARRIED.** 8:03 P.M.

**Minutes of the General Meeting - RASC Saskatoon Centre  
Monday, September 13, 2021 - 8:00 pm Online (ZOOM)**

**Attendees (online): 16 members attending on-line at beginning of meeting.**

1. Sharing / Networking Time 8:05 for 15 minutes – all members.

2. **Call to order** - 8:20 PM - Ron Waldron
3. Call out to new members/guests – no new members or guests present.
4. **Announcement:** Meetings will be on-line until further notice due to the rise of COVID.
5. Adoption of **June General Meeting minutes** as circulated. **Moved:** Ellen Dickson. **Seconded:** Mike Dolan. **CARRIED.**
6. **Treasurer's Report** – Donna-Lee May - same as in Executive minutes
7. **Committee Reports**

**SSSP Report** – Les Dickson – An article is in the Newsletter. Rick Huziak also wrote about SSSP Behind the Scenes. COVID-19 was handled fairly well with outdoor presentations and distanced events such as the swap table. 290 attendees - only 35 fewer than a normal year. Les thanked the SSSP Committee & volunteers, and Laura Eglar and George Charpentier who did a great job on the on-line photo contest. Colin Chatfield & Tara Magee were thanked for being on-line (remote) photo judges. Rick reported on possible Cypress Observatory future operations. Ron Waldron thanked Les for chairing the SSSP.

**Activities Coordinator Report** – Tim Yaworski not present so reports are as follows:

Ron Waldron reports: Ron & Mike Dolan presented at **Pike Lake Provincial Park** on August 12. Ron gave the talk, but it was cloudy for star-night. Tara Magee and Colin Chatfield also helped out. Attendance was about 70.

Rick Huziak reports: Rick, Tara & Colin presented at **Blackstrap Provincial Park** on August 14. The sky was clear so showed the moon (sanitizing the eyepiece between views) and did a naked eye star-walk. Attendance was about 70. Each talk raised \$90 for the Centre.

## 8. **General Announcements** to Members – Ron Waldron

- Members can buy **RASC 2022 calendars** @ \$20 each – call Donna-Lee May to order. Calendars can be paid for and picked up from Donna-Lee once they arrive.
- **Sleaford Clean-up** September 26<sup>th</sup>. Will schedule work for as many members as can come. 1:00 - 5:00 pm.

- **October 18 AGM** - vacating position: Vice-president – will need a member to step up to be elected to that position. All other positions are also open. Slate of officers will be voted in at the meeting.

## 9. Program:

**The Upcoming Sky – Colin Chatfield / Tara Magee** – Colin & Tara discussed the sky nightly for the month.

**New Challenges in Light Pollution in Saskatchewan - Rick Huziak.** Rick discussed new light pollution issues in Saskatoon and around Saskatchewan.

**SSSP 2021 in Pictures - Les Dickson.** Les presented a summary of SSSP from images taken by George Charpentier.

10. End of Meeting discussion.

11. **Call for Adjournment:** Colin Chatfield. **CARRIED.** 9:24 p.m.

## Minutes of the Executive Meeting - RASC Saskatoon Centre Monday, October 18, 2021 - 7:00 pm Online (ZOOM)

**Attendees (online):** Ron Waldron, Mike Dolan, Les Dickson, Rick Huziak, Grant Ursaki, Mark de Jong, Darrell Chatfield, Tenho Tuomi, Colin Chatfield, Cam McLlland, Jeff Swick

1. **Call to order** – Ron Waldron. 7:04 PM

2. **Approval of the September Executive Minutes** as circulated. **Moved:** Les Dickson. **Second:** Mike Dolan. **CARRIED.**

3. **Call for additional announcements/items** to add to agenda. No additional items added.

4. **Old business:**

**Update on the Sleaford:** Darrell Chatfield:

1. New mower moved to Sleaford ~Sept. 20;
2. 16" telescope moved on September 23;
3. Cleanup Day held on September 26:

- Shed was cleaned up;
  - Deck was scraped, some railing and treads rebuilt and the entire deck stained.
4. Darrell reports he has contacted the RM of Colonsay who cut the grass in a few weeks to prepare for winter; Darrell will buy some lumber to make anti-slip cleats for the ramp (within the maintenance budget).
5. Discussion regarding **the maintenance of our Centre/SSSP websites** – Rick Huziak – the Centre needs a **website content editor** who will maintain the website (other than the current webmasters, who are busy). Ron will discuss at General meeting and possibly add a person to the task.
- 6. New business:**
- a. **National Award Nominations** suggestions – Rick Huziak – please forward nominations for any of the national award to Rick, Mike Dolan or Ron Waldron.
  - b. **Planning for observatory building** to house the refurbished 16-inch telescope – Ron Waldron – Suggest that we design a housing to be built in the spring. Les Dickson suggests a plan and budget be developed now. Ron suggests a 16" observatory committee be struck.
  - c. Future direction of **Writing/Updating Centre Bylaws** – Les Dickson – Les will review current information (binder) and report on how the project can progress.
  - d. **Payment for SSSP funds request** received from the Regina Centre. Ron Waldron / Les Dickson - Saskatoon will deal with this as soon as we can and will pay ~80% of what is owing before the next meeting if the books are not ready by then.
  - e. **Vice-president position discussed** – Ron Waldron. Ron expressed that the VP should commit to become President in the term following.

**7. Call to adjourn. Moved:** Mike Dolan. **CARRIED 7:40 p.m.**

**Minutes of the Annual General Meeting - RASC Saskatoon Centre  
Monday, October 18, 2021 - 8:00 pm Online (ZOOM)**

**Attendees (online): 18 members and guests** at the beginning of the meeting.

**1. Sharing / Networking Time** – all members

- 2. Call to order** – Ron Waldron - 8:15 PM
- 3. Call out to new members/guests** – Welcome to new members Warsha Mushtaq and Payton Byrns.
- 4. Adoption of September General Meeting minutes** as circulated. **Moved:** Ron Waldron. **Seconded:** Jeff Swick. **CARRIED.**
- 5. Financial Report** – Ron Waldron on behalf Donna Lee May – no report – will be presented in November.
- 6. Committee Reports:**
  - a. **Sleaford Committee** – Darrell Chatfield (same as what was presented in Executive minutes)
  - b. **SSSP 2021 Committee** – Les Dickson – Close-out meeting to be held Oct. 21; Budget should be cleared up by the November meeting.
  - c. **Telescope Rentals** – Ike Thiessen – 1 telescope returned, 2 will return in November for audit and servicing. Ron Waldron & Ike will do the inventory.
- 7. Election of Officers for 2021-2022 term.** Ron Waldron presiding:

#### **Elected Saskatoon Centre Executive 2021-2022:**

##### **National Executive Positions**

- **President** – Mike Dolan (2-year term)
- **Vice-President** – **Vacant (2 year term)**
- **National Council Rep** - Les Dickson
- **Secretary** - Rick Huziak
- **Treasurer** - Donna-Lee May

##### **Support Positions**

- **Past President** – Ron Waldron
- **Librarian/Archivist** - Darrell Chatfield
- **Activities Coordinator** - Tim Yaworski
- **Newsletter Editor** - Colin Chatfield
- **Web Master** - Gordon Sarty, **vacant Web Content Writer (new positon added) (1)**
- **Sleaford Maintenance Coordinators** - Darrell Chatfield, Rick Huziak
- **Observers Group Coordinators** - Larry Scott and **vacant (2)**

- **Speaker Coordinator** - Rick Huziak
- **Membership Coordinator** - Mark de Jong
- **Telescope Rental Coordinators**- Ike Thiessen and Ron Waldron
- **Meeting Room Coordinator** - Daryl Janzen
- **Photographers** - George Charpentier, Mike Dolan
- **Social Media Coordinators** - Colin Chatfield, Tim Yaworski
- **Observing Certificate Coordinator** - Darrell Chatfield

### **Board of Directors**

- Les Dickson
- Norma Jensen
- Ron Waldron
- Tenho Tuomi

**Board positions as above. Moved:** Tim Yaworski. **Seconded:** Grant Ursaki. **CARRIED.**

#### **Notes from election slate:**

(1) Colin Chatfield & Rick Huziak will attempt to find a Website Content Editor. (Note Warsha Mushtaq has web experience using newer web tools but limited html experience)

(2) Position suggested maybe to become a “pay to use” or “work to use” by user members if no one assumes the position.

**8. Committee for 16” Observatory** created: Volunteers: Payton Byrns, Tim Yaworski, Mike Dolan, Ron Waldron, Darrell Chatfield.

**9. Dispensing with financial audit according** to the Non-Profit Corporations Act of Saskatchewan. **Motion:** by Mike Dolan “That the Saskatoon Centre, RASC resolves not to appoint an auditor to review the records for the 2020-2021 fiscal year” **Seconded:** Tenho Tuomi. **Discussion:** Jim Wood would like the motion to be clarified since terminology is likely not correct. **Motion is withdrawn** (Mike Dolan) & will be presented at the November meeting with clarified terminology. **SEE MINUTE 11 BELOW:**

*The remainder of the meeting was chaired by the newly elected President, Mike Dolan.*

### **10. Program:**

***The Upcoming Sky*** – Colin Chatfield & Tara Magee

### **Narrowband Imaging – a new Saskatoon Centre Group – Jeff Swick**

Jeff gave a great live talk about the narrowband imaging and gave a live tour of his *Centre for Backyard Astrophotography*, a.k.a. beer garden garage.

- 11. Updated wording for the audit motion found by Les Dickson during the meeting, thus: Moved** by Mike Dolan: “The members of the corporation resolve not to appoint an auditor nor a person to review the financial statements of the corporation.” **Seconded:** James Wood. **CARRIED.**

### **12. Sharing Time:**

Tim Yaworski and Ron Waldron share their experience and **photos from Monday night's (Oct. 11) auroral display**. Other members are welcome to share as well.

- 23 members on-line at the end of the meeting** (including Yannis Pahatouroglo currently in Greece!)

- 13. Adjournment: Moved:** Cam McLelland. **CARRIED** 9:43 P.M.

## **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](http://www.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** 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](http://www.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
Marcel Müller-	94
Goldkuhle	
Wade Selvig	75
Wayne Schlakohl	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 Schlakohl	55
Jim Goodridge	35

#### **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

#### **ISABEL WILLIAMSON**

#### **LUNAR OBSERVING CERTIFICATE**

##### **Certified at 140 Objects:**

*T. Tuomi, N. Jensen*

#### **EXPLORE THE MOON CERTIFICATE**

*T. Yaworski*

#### **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.astroligue.org/al/obsclubs/herschel/hers400.html>

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