Saskatoon Skies

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

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The newest, and youngest, members of the Saskatoon Centre. Read more on page 5.

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http://www.usask.ca/rasc/newsletters.html

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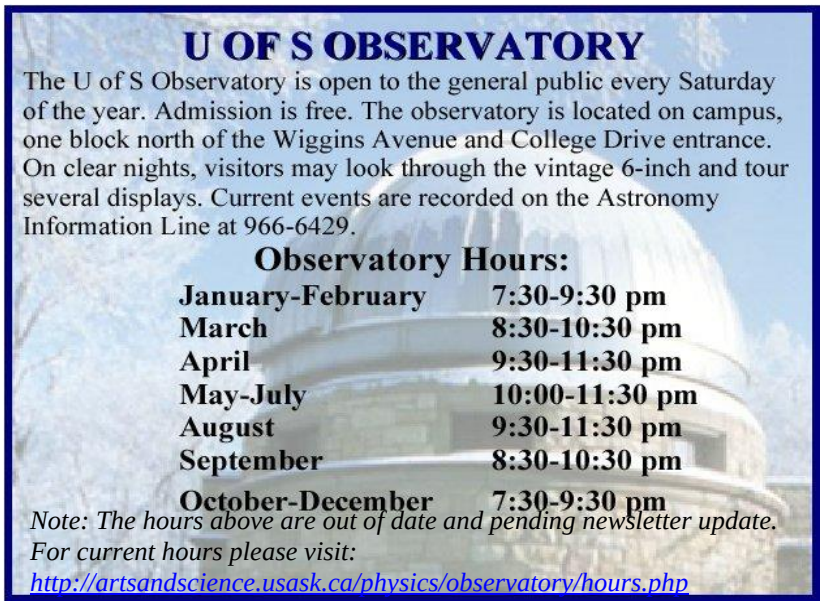
MEMBERSHIP? JOIN TODAY!

Regular: $85.00 /year **Youth: $45.00 /year** **Family: $80/year**

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. If you do not want to join at this time, ask to get onto our FREE 3-month Temporary Membership list. You will receive regular mailings of our Saskatoon Skies newsletter and will be invited to participate in Centre activities. Members are encouraged to renew early to avoid disruption in publications. Renew through the National Office at http://www.rasc.ca/join-us

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)
- SkyNews Magazine (bimonthly)
- use of the Centre library
- borrow the Centre's Data 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
- discounts to Sky &Telescope Magazine*
- Free, no-cost, no-obligation, 3-month temporary membership if you don't want to join right now!

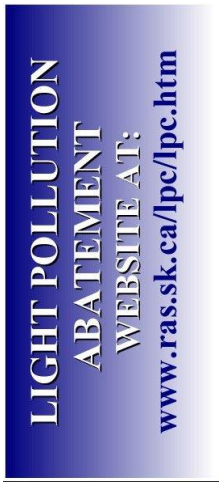


SASKATOON CENTRE'S
MAIN OFFICERS:

President – Tim May
Vice-President – Alan Duffy
Secretary – Marcel Müller-Goldkuhle
Treasurer – Norma Jensen
National Council Rep – Rob Shepard

Bottle Drive &
Canadian Tire $
By Les Dickson

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



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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 krisohn@gmail.com in msword or text format. Images: any format, less than 30MB, sent by e-mail as attached files. **Deadline for submission of all articles for an upcoming issue is the first Friday of the month!**

A separate by-mail subscription to Saskatoon Skies is available for $15.00 per year. 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 krisohn@gmail.com for rates. Members can advertise non-commercial items free of charge.

RASC CALENDAR OF EVENTS

June 19	**RASC General Meeting**	Tim May
June 24	**Observers Group at Sleaford**	Larry Scott
July 22	**Observers Group at Sleaford**	Larry Scott
August 23-27	**21st Annual Saskatchewan Summer Star Party**	Rick Huziak
September 18	**RASC General Meeting**	Tim May

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, Room 175 Physics Bldg
University of Saskatchewan, on

Monday, June 19th, 2017 at 8:00PM

Presented by Alan Duffy:

Discussion on using the PixInsight program

PixInsight is a very impressive astrophotography processing program and with its wealth of tools it has a bit of a learning curve. There are some essential steps required in order to process images and obtain favorable results. There are two types of processing: pre-processing and post-processing. In a nutshell, pre-processing enhances image data, and post-processing selectively uses image data to get a pleasing result. The entire process may seem intimidating but with a little practice it isn't too difficult to create beautiful astrophotos. This talk will go over some basic concepts and how to process and image from start to finish with a hands on demonstration.

Presented By Alan Duffy and Tim Yaworski:

Discussion of National Star Party Plans

Discussion of the upcoming National Star Party plans for daytime viewing of the sun at the 8th Street London Drugs. Set up, display, scope, and viewing ideas are open for discussion.

Note: There will be an Executive Meeting at 7:00PM

Minutes of the May Meetings

— Marcel Müller-Goldkuhle

Minutes of the Executive Meeting, May 15, 2017

Meeting called to order by Alan Duffy at 7:15 PM
Approval of April 17 Executive Meeting Minutes: Moved by Mark, seconded by Les, approved.

Reports:

Treasurer:	no update
Membership:	Total 95, +1 member from previous month. The issue regarding access to membership information on the National Website has been resolved.
National:	A Light Pollution Committee has been founded. Currently three positions are open in the National Executive Committee. In order to improve fundraising, National plans to get support from Blue Canoo Consulting. Work on the website has been done to solve access issues. 300 copies of Skynews have been placed in Air Canada Lounges. Clubs are supposed to submit information about 150 year anniversary to National. National is working on a strategic plan. Slides showing the underlying concept were presented.
Observers Group:	Observers Group Meeting at Sleaford on May 27.
Sleaford:	no update
SSSP:	More volunteers are still required, about 50 are needed in total. Very important is to fill the position of the Volunteer Coordinator. Earlier registration makes planning easier. Rooms at the Resort are blocked until July 6.
Youth Club:	The last meeting before the summer break is planned on May 29.
Newsletter:	Next closing date is June 2. SSSP article is planned for the next issue.
Telescope Coord.:	no update

Old Business:

Open Positions:	Coffee Supply Coordinator, Event Coordinator Ellen is willing to support the person who takes over the Event Coordinator Position. In order to make it easier to fill the Event Coordinator position, it is suggested to split this function per event.

Events:	Alan Duffy volunteered as the event coordinator for the National Star Party Venue at the London Drugs parking lot on 8th Street. It is planned not to sell food/drinks as this would bind too much resources.
Yahoo Website:	More information expected by end of May.
Advertising:	no update (business cards and banners)
Memorabilia:	no update

New Business:
-

Meeting adjourned at 7:56 PM.

Minutes of the General Meeting, May 15, 2017
Meeting called to order by Tim May at 8:10 PM.

Presentations:

Alan Duffy:	Remote Telescope Astronomy Basics
Mark de Jong:	Variable Star Observing with a small Telescope

Saskatoon Centre's New Youth Astronomy Club

– *Ron Waldron*

On the front page is a quick look at the newest (and youngest) members of the Saskatoon Centre. The Youth Astronomy Club started in January 2017 by Ron Waldron and Errol-Fraser Harrison currently has seven members ranging in age from 12 – 13 years. Shown there are five of the members with their leaders in front of a portable planetarium at the U of S. The group meets the last Monday of every month in their "clubhouse" the U of S Observatory.

Four meetings have been held covering the following topics:

February	*Constellation Identification*
March	*Learning to use Star Maps with Right Ascension and Declination*
April	*Types of Telescopes and how to use them*
May	*A field trip to a portable planetarium*

The group has recessed for the summer but will start up again in the fall. Plans then include getting the members started on their Explore the Universe Certificate and a field trip to the Sleaford Dark Sky Site during the annual fall open house.

Senior members of the RASC are always welcome to contribute or help with the education of these fine young people. We are looking for short talks on sketching, astrophotography without a telescope, and many other areas. Simply let us know if you wish to come to a meeting and offer your expertise.

Introduction to Astrophotography Equipment

– *Colin Chatfield*

In the last article on night sky photography, I introduced the three basic concepts of taking pictures, namely the exposure triangle consisting of ISO, shutter speed, and aperture. I also mentioned that DSLRs are preferred but not necessary for capturing the night sky. If there is some manual control over settings, that is ideal.

For most night sky photography (other than astrophotography), a wide-angle lens will capture most of what one wants, especially for the Milky Way and auroras. There is a vast number of good lenses that will work. Check out the Tokina 11-20mm f/2.8 (formerly 11-16mm f/2.8), the Rokinon line of various lenses, Canon 8-15mm, and so on. The faster the lens (aperture of less than f/3.5) the better. Using a lens slower than that can produce more noise (grain).

Using a wider-angle lens will also result in a longer shooting time with reduced star trails (streaks) visible in the sky. A little-known setting to remember is that if your lens has any image stabilization, or whatever your brand calls it, turn it off. It is meant for hand-held shooting, not used on a tripod. Also, a lens hood is good, even for night shooting, to reduce lens flares, especially if any stray light is present.

A good tripod is preferred as well. A cheaper plastic one will work, except if it's windy when shooting as it can cause blur. A metal one can withstand more wind, thus reducing blur.

Using a remote shutter release cable or remote switch will help reduce blur too. If that's not an option, using the timer on the camera will help too. Either the two or ten second timer will work.

For shooting auroras, I usually start with the same settings and work from there. ISO at 1600, shutter speed 20 seconds, aperture (f-stop) f/2.8. If too bright, decrease the ISO first. If too dark try adjusting the speed to 25 or 30 seconds.

For white balance, I typically shoot in the 3200K (tungsten) – 4000K (white fluorescent) range. I prefer the blue/green versus the orange/yellow look. However, white balance is based on personal preference, so choose what you like best. For picture style, I choose landscape over portrait or standard, etc. I find that landscape captures the most colours.

There's two different ways to capture auroras. One is to use a long shutter speed so it appears like a curtain across the sky. The other is to increase the ISO somewhat and decrease the shutter speed to catch the spikes in the aurora. For example, if I want it to look more curtain-like, try using ISO 1600 for 20-30 seconds. For capturing the spikes try using ISO 3200 for 10-15 seconds.

For Milky Way shooting, I set the ISO around 3200 – 6400 to capture as much detail as possible. I keep the shutter speed to around 15-20 seconds at the most to keep star trails to a minimum. The other settings are the same as shooting auroras, except for shooting on a night when there is no Moon as it will wash out the Milky Way.

There's a wealth of information for predicting when auroras may occur. Spaceweather.com and softservenews.com are very useful resources. For the Milky Way, look at the Stellarium app, among others, for your phone or the computer to predict its location.

One other important part to remember is getting to dark skies. One can shoot the aurora within the city at times and possible even the Milky Way. But there will be a vast difference between that and getting to dark skies. It is increasingly difficult to find dark sky around Saskatoon and one is forced to drive further away more often than before. For shooting auroras, I always recommend getting east or northeast of the city, or between Radisson and Battlefords. For Milky Way, head east or south.

The last aspect to keep in mind when out night shooting this summer is to have fun. That is the biggest part of what I do. I have fun and I shoot for me and no one else. Happy hunting to you all as we enter vacation season.

Observer's Group – *Larry Scott*

Sometimes things work out just right. On May 27th our scheduled Observer's Group met with some initial adversity that turned into a memorable night. We began with six members on a cloudy evening after a day of howling winds. My plans to observe Jupiter were thwarted by the abysmal seeing conditions and then by clouds. Also working against us was the soft glow of aurora which was visible in the sucker holes as they floated by. Then it rained a little. Slowly but surely we had lost three members as the evening progressed. Upon hearing there might be a good display of Northern Lights, one of our remaining members returned to Saskatoon and brought back his wife. As if on cue they returned around 01:15 as the sky exploded into dancing ribbons of light. The soft background glow became organized into pink sheets and ribbons stretching from horizon to horizon. (This storm was visible in many southern states including California.) At times some of the best displays were directly overhead (a corona). For the next two hours we were treated to a dazzling show until the dawn began to wash them out.

Next scheduled Observer's Group is June 24th with moonless evenings from June 16th to 28th. Please note this is only an excuse for lawn mowing as there are no truly dark skies at this time of year. Nevertheless, the summer sky is a beautiful sight from Sleaford during the summer twilight and we will have Saturn and Jupiter nicely positioned in the evening. Have a good summer and hope to see you at Sleaford and SSSP.

Observing Clubs and Certificates

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

Ron Waldron	108
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

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

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 on the National website.
On-line Messier and Finest NGC lists, charts and logbooks: **http://www.rasc.ca/observing**
On-line Herschel 400 List: **http://www.astroloeague.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**