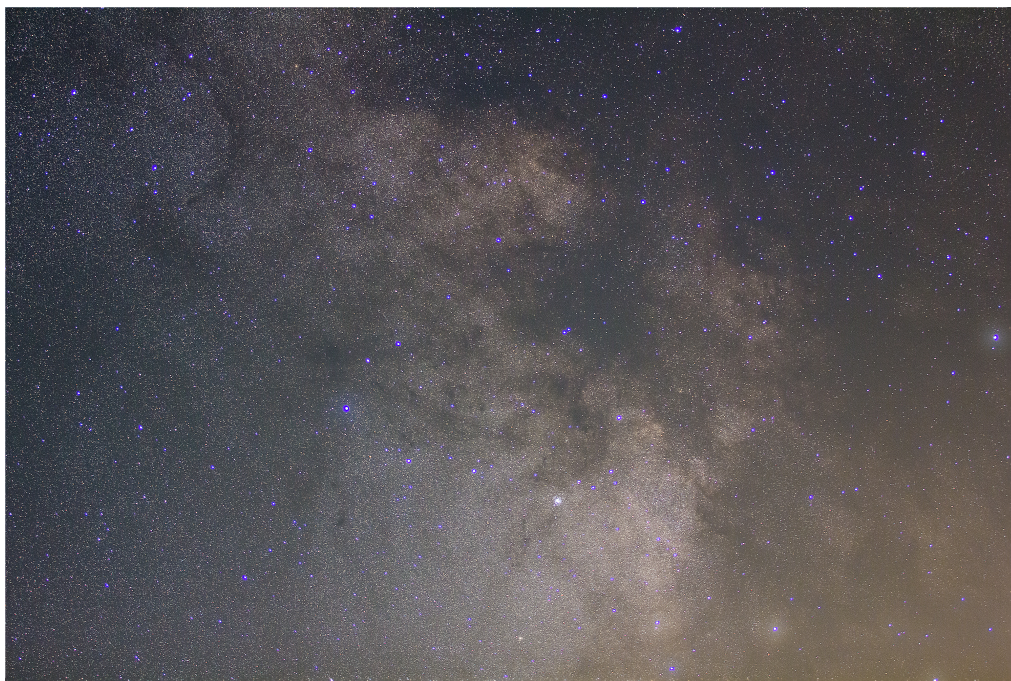


Saskatoon Skies

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

Vol. 46, No. 12

December 2015



This remarkable photo of the Milky Way was taken by Kris Ohnander in early September of this year. Kris used a Canon 60D with a 70-200 mm lens on the tracking mount at Sleaford. Approximately 8 minutes of exposure with 40 second subs, no darks, no flats, no bias. Processed in Registax.



Saskatoon Centre

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To view *Saskatoon Skies* digitally, see our Website:

<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 <http://homepage.usask.ca/ges125/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!

*New subscription or renewal of Sky & Telescope? Send new info or renewal notice, plus credit card # to Norma Jensen, 128 – 4th Street East, Saskatoon, SK S7H 1H8, or email her at norj@sasktel.net.

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 966-6429.

Observatory Hours:

January-February	7:30-9:30 pm
March	8:30-10:30 pm
April	9:30-11:30 pm
May-July	10:00-11:30 pm
August	9:30-11:30 pm
September	8:30-10:30 pm
October-December	7:30-9:30 pm

SASKATOON CENTRE'S MAIN OFFICERS:

Interim President – Les Dickson

Vice-President – to be filled

Secretary – Tenho Tuomi, 306-858-2453

Treasurer – Norma Jensen, 306-244-7360

Bottle Drive &
Canadian Tire \$
By Jim Goodridge

If you cannot make it to a meeting but would like to contribute your Canadian Tire money please call me at 306-370-8530

LIGHT POLLUTION
ABATEMENT
WEBSITE AT:
www.ras.sk.ca/lpc/lpc.htm

Newsletter Editor – Kris Ohnander
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 krisohn@gmail.com in msword or text format. Images: .jpg please, no larger than 1 – 1.5 MB, 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 call the editor 306-382-9428 for rates. Members can advertise non-commercial items free of charge.

RASC CALENDAR OF EVENTS

Dec 12	Observers Group	Larry Scott
Dec 13-15	Geminid Meteor Shower	
Jan 3-4	Quadrantid Meteor Shower	
Jan 9	Observers Group	Larry Scott
Jan 18	RASC General Meeting	Les Dickson
Feb 6	Observers Group	Larry Scott
Feb 15	RASC General Meeting	Les Dickson

For a complete list of club events, please check out: <http://www.usask.ca/rasc/activities.html>



January RASC General Meeting

for all members and guests
Room 175 Physics Bldg
University of Saskatchewan
on

Monday, January 18th, 2015

at 8:00PM

Program

TBA

Minutes of the November Executive and General Meetings

– Tenho Tuomi

Minutes of the November 16 Executive Meeting

The meeting opened at 8:09 pm, chaired by past president Jim Gorkoff, with 8 members and visitors present.

Moved by Les Dickson and Darrell Chatfield that the agenda be accepted with one addition. Carried.

Moved by Norma Jensen and Les Dickson that the minutes of the October 19 meeting be accepted as circulated. Carried.

Committee Reports:

- Treasurer's Report by Norma Jensen. Full financial report for the past year will be presented in January.
- Membership Report – none.
- Observing Co-ordinator Report by Norma Jensen. Three new members came to the last Observer's group at Sleaford. Taurids were observed. New self-propelled lawn mower purchased for Sleaford.
- Newsletter Report. Next deadline December 4.
- Sleaford Site Report by Darrel Chatfield. Should ask the municipality to mow the yard any time that they are mowing the roadside. Estimated cost is \$5000.00 for getting power to the shed.
- SSSP Report. Next meeting is on Thursday. Electronic billing should be available for next year's SSSP. There was a discussion of the distribution of SSSP profits, expenses and responsibilities between Saskatoon and Regina.
- Centre Rep Report – none.
- Saskatchewan Light Pollution Abatement Report – none.
- Fundraising Report – none.
- Events Report. There was a discussion of the date for December's Potluck meeting. The decision was left to the general meeting.
- Nominating Committee Report. Darrel Chatfield, Jim Gorkoff and Les Dickson phoned or contacted all Centre members for the Executive positions.

Moved by Norma Jensen that the meeting adjourn. (7:50 pm)

Minutes of the November 16, 2015 Annual Business Meeting

The Annual Business meeting of the Saskatoon Centre opened at 8:05 pm, chaired by past president Jim Gorkoff with 17 members and visitors present.

Nominating Committee chairman Darrel Chatfield took the floor for the election of the Executive officers. The following were nominated:

- President – Les Dickson (one year)
- Past President – Jim Goodridge
- Vice President – open
- Secretary – Tenho Tuomi
- Treasurer - Norma Jensen
- National Council Representative – open
- Members at Large – Curtis Tuplin and Errol Frazer-Harrison
- Newsletter Editor – Kris Ohnander
- Sleaford Site Co-ordinator – Darrell Chatfield
- Observing Co-ordinator – Larry Scott
- Fundraising – open
- Meeting Room – Ellen Dickson
- Photographer – George Charpentier
- Membership – Mark De Jong
- Librarian – Darrell Chatfield
- Telescope Rentals - Errol Frazer-Harrison

Nominations closed at 8:41 pm. All were voted in and declared as elected.

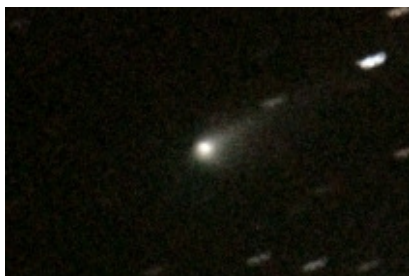
Moved by Jim Gorkoff and Ellen Dickson that “be it resolved that the number of directors of the corporation be 5 and that the election of the following directors be approved, they being Richard Huziak, Norma Jensen, Tenho Tuomi, Ron Waldron and Les Dickson”. Carried.

Moved by Jim Gorkoff and Norma Jensen that “the members of the corporation resolve not to appoint an auditor nor a person to review the financial statements of the corporation”. Carried.

The business meeting adjourned at 8:52 pm followed by a presentation by Yannis Pahatouroglou on “a description of the history of the 24" Tarasoff telescope, its donation to the Dept of Physics by Karen Larson, our efforts to ascertain its quality and the plans we have for using it”. A lengthy discussion followed.

The meeting adjourned at 9:58 pm.

Comets this Fall – *Tenho Tuomi*



Comet 67P/Churyumov-Gerasimenko

Photographed in Leo on Oct 15. Perihelion was August 15. I could not see it but this comet was of interest because of the Rosetta spacecraft which orbited it and the Philae lander that landed on it.



Comet C/2014 W2 (PANSTARRS)

Photographed near Polaris on Nov 22. It was barely visible in my 12" at 100 power. It will be visible for several months but this is about as bright as it will get. It will be closest to earth on Dec 8. Perihelion will not be until next March but it will be no closer than the asteroid belt.



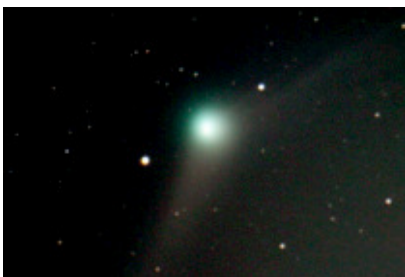
C/2013 X1 (PANSTARRS)

Photographed Nov 22 as it passed M34. I easily saw it at 60 power. It will be at its brightest next spring or summer Perihelion will be next April when it will be within Mar's orbit. It will be closest to earth next June.



Comet C/2014 S2 (PANSTARRS)

Photographed in Draco on Dec 1. I saw it in my 80mm finder. It will stay at this brightness or a little brighter for a few months. Perihelion will be Dec 9 outside Mar's orbit. It will be closest to Earth on Feb 27. This comet is circumpolar and visible all night.



Comet C/2013 US10 (Catalina)

Photographed in Virgo on Dec 2 in moonlight. Perihelion was on Nov 15 within Earth's orbit. It became visible here at the end of November. It will be closest to Earth on Jan 17. Note the tail pointing to the sun instead of pointing away from it. This morning comet should be our brightest comet once the moon goes away.

I did photograph a couple faint periodic comets, 19P/Borelly on Oct 15 and 10P/Tempel on Dec 2 but their pictures are too faint to show. I photographed comet 10P in July 2010 the previous time that it was close to earth.

President's Report – *Les Dickson*

As the new President of the Saskatoon Centre of the RASC, I would like to thank the membership to giving me an opportunity to serve again.

Our Centre would not function without the dedication and efforts of those who have stepped up to join the Executive for 2016. Firstly, I want to thank Tenho Tuomi, Norma Jensen, Mark De Jong, Darrell Chatfield and Larry Scott, who have volunteered to serve for another year. I want to thank and welcome new Executive members Kris Ohnander, Dale Boan, Curtis Tuplin, Errol Frazer-Harrison and Ellen Dickson for stepping up to join the Executive for the coming year. While not on the Executive proper, I wish to thank Rick Huziak for all of his efforts in various capacities, and James Gorkoff for helping Norma with the finances for the Centre.

We have a few important holes to yet to fill. We don't have a Vice-President. The VP is assists the President, steps in when s/he is not available and succeeds him/her when their term is up. This year, without a VP, we did not have someone to step in when our past president Jim Goodridge had to step down. I am happy to serve out the second year of his term, but we need to avoid this situation in the future. Please consider putting your name forward. We still need a National Advisory Committee Representative for our Centre.

We have been somewhat behind the times with the design of our website, which has not changed for many years. We also have not effectively used social media to connect with our members and reach out to the general public. I am hoping some members might step up to help us in these two important areas. I do want to thank Andrew Kostiuik who has already impressed us with his prototype of a new website for SSSP. This is a good start, but we need to do more.

Remember that the business portion of our monthly meetings, aka Executive Meetings, are open to all members. Drop by and see what mischief we get into.

We have a number of events planned for 2016. These include: Earth Hour (March 19) • Astronomy Week (March/April) • Messier Marathon (April) • Solar Observing at the Farmers' Market (May/June) • Saskatchewan Summer Star Party (August) • Sleaford Open House (Sep/Oct). More information is available on our website at www.usask.ca/rasc/activities.

I hope to see you at our regular meetings on the third Monday of each month (except July and August; date shifts due to holidays as necessary). Everyone is welcome.

2016 SSSP Notes – *Les Dickson*

The premier astronomical event of each year for the Saskatoon Centre is the Saskatchewan Summer Star Party (SSSP). This event is co-organized by members of the Saskatoon and Regina Centres of the RASC. It is held each August near the new moon at the Cypress Hills Interprovincial Park and Dark-sky Preserve. In 2016, it will be August 4-7, Thursday through Sunday. The observing field is usually the Meadows Campground, but in 2016 it will be the adjacent Ball Diamond. The move is required to

accommodate the expected large number of campers using the Meadows for the week following the August long weekend. More details about this will be passed along as we work with the Park Management to make the arrangements.

This year we are fortunate in that we have been able to get most of our presenters in place before January.

Our featured speaker giving the Fr. Lucien Kemble Memorial Lecture is Jay Anderson of Winnipeg. Jay is a dedicated solar eclipse chaser and is well known for his eclipse weather predictions. He is co-author of the NASA eclipse circulars, a retired meteorologist and astrophotographer. Given that the next solar eclipse is 2017 and crosses the continental U.S. not far south of us, he was an obvious choice for 2016.

Speaking on Saturday will be Kenton Lysak, senior interpreter for the Meewasin Valley Authority at the Beaver Creek Conservation Area. He is involved in the protection of the Northeast Swale and has an interest in maintaining dark skies within urban and natural environments. He has organized a project to measure the darkness of our skies using Sky Quality Meters and will be presenting his findings at SSSP.

The “Under Living Skies Public Lecture” scheduled for Thursday evening will be Candace Savage. Candace is a well-known local writer and an organizer of the “Wild About Saskatoon Nature City Festival”. The theme of her presentation is to be announced closer to the event.

We are looking for speakers to present two evening “under the stars” clinics at SSSP. Some previous presentations have been binocular star walks, astrophotography and sketching at the eyepiece. If are interested, please contact me.

Other events at SSSP will include the BBQ, banquet, public star night viewing and solar observing for park patrons. During downtimes, attendees can take advantage of all of the venues and activities that the park provides. It is a great place to come for a family vacation, not just for viewing under some of the darkest and clearest skies in western Canada.

SSSP does not run itself. It takes a dedicated group to organize and run it each year. As Rick Huziak as mentioned in another article, we are always looking for new people to step up and help us out. We are in great need of a Meadows Coordinator to organize the campground and the Ball Diamond facilities over the weekend. I need an assistant to help me in the Wapiti Room in the Resort during the daytime activities and presentations. We also need a Volunteer Coordinator to organize the many on-site volunteers we need to make the event work smoothly. Contact me or Rick if you are willing to help plan and organize SSSP for the coming year. We encourage all of our members to come down to Cypress Hills and enjoy a great weekend under the stars. See you there!

Les Dickson

e-mail: astrochem@sasktel.net

SSSP 2016 Call to Action – *Rick Huziak*

The 2016 Saskatchewan Summer Star Party Committee would like to welcome Andrew Kostiuk to our midst. We'd also like to thank Jim Goodridge and Muriel Miller for helping out last year – they were invaluable, but they cannot return this year. So Les, Ellen, Darrell, Rick and Andrew could use more hands on deck. We are looking for committee members that might take on the positions of Meadows Coordinator, Volunteer Coordinator and Speakers' Assistant or just generally help out. To run any star party, a strong core committee is needed. The committee meets approximately monthly and then weekly beginning 6 weeks prior to the star party. If you are interested, please contact SSSP'16 Chair Les Dickson at astrochem@sasktel.net

Observer's Group – *Larry Scott*

Our November 7th Observer's Group was held as scheduled even though sky conditions were poor. Seven members attended a shortened session as clouds rolled in around 21:30. Several members had expressed an interest in being trained for key privileges at Sleaford, so during the course of the evening three members had the tour and received their key. There were attempts at observing some of the Taurid meteor shower without much luck. Highlight of the day for me was trying out our new mower which should greatly ease our efforts next summer. Thanks to the executive for approving this purchase.

Future observing opportunities include an early morning comet - C/2013 US10 (Catalina); our December Observer's Group on the 12th; Geminid meteor shower peaking on the evenings of the 13 and 14th; moonless skies from December 31st to January 13th; Quadrantid meteor shower on the evening of January 3rd and morning of the 4th; and another Observer's Group on January 9th.

Season's Greetings to you all!

HAPPY NEW YEAR

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. Jeffrey, D.
Chatfield, B. Christie, K.
Noesgaard,
M. Stephens, B. Hydromako, T.
Tuomi, L. Scott, G. Charpentier,
B. Johnson, M. Clancy, L.
Dickson, B. Burlingham, K.
Houston, Norma Jensen*

Ron Waldron	108
Wade Selvig	75
Garry Stone	57
Bernice Friesen	45
Wayne Schlapkohl	43
Barb Wright	40
Ellen Dickson	34
Jeff Swick	24
Graham Hartridge	9

Chatfield BINOCULAR CERTIFICATE

Certified at 35 to 40 Objects:

*M. Stephens, T. Tuomi, M.
Clancy,
R. Huziak, K. Maher*

Jim Goodridge	12
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FINEST NGC CLUB

Certified at 110 Objects:

*R. Huziak, D. Jeffrey, G. Sarty,
D. Chatfield, T. Tuomi*

Larry Scott	110
Scott Alexander	97
Norma Jensen	83
Sandy Ferguson	23
Kathleen Houston	23
George Charpentier	13
Mike Clancy	7

EXPLORE the UNIVERSE

Certified at 55 to 110 Objects:

*M. Clancy, T. Tuomi, K. Maher,
B. Gratias*

Wayne Schlapkohl	55
Jim Goodridge	35
Sharon Dice	31

Isabel Williamson Lunar Observing Certificate

Certified at 140 Objects:

T. Tuomi

Norma Jensen	140
Jeff Swick	29

HERSCHEL 400 CLUB

Certified at 400 Objects:

*D. Jeffrey, R. Huziak, D.
Chatfield, T. Tuomi*

Gordon Sarty	251
Scott Alexander	117
Sandy Ferguson	18
Larry Scott	20

HERSCHEL 400-II CLUB

Darrell Chatfield	400
Tenho Tuomi	398
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.astroloague.org/al/obsclubs/herschel/hers400.html>

Binocular List is at: [http://homepage.usask.ca/~7Eges125/rasc/Chatfield Binocular List.pdf](http://homepage.usask.ca/~7Eges125/rasc/Chatfield_Binocular_List.pdf)

"Isabel Williamson Lunar Observing Program Guide:

<http://www.rasc.ca/observing/williamson-lunar-observing-certificate>

Program details can be found at: <http://www.rasc.ca/williamson/index.shtm>