

# Saskatoon Skies

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

Vol. 46, No. 02

February 2015



*Lorin Briand, this month's guest speaker, is planning to build a radio-telescope at the old Alsask Radar Dome on the border between Saskatchewan and Alberta. He is currently in the process of recruiting volunteers for the project. If you are interested or would like to know more, see page 5 of this issue.*



Saskatoon Centre

The Royal Astronomical Society of Canada

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<http://www.usask.ca/rasc/>

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To view *Saskatoon Skies* in colour, see  
our Website:

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

## In This Issue:

Membership Information / Bottle Drive / Officers of the Centre	2
U of S Observatory Hours / Light Pollution Abatement Website	2
Calendar of Events / Notice of Meeting	3
Minutes of the January Executive & General Meetings	4
Building the Alsask Radio Observatory – Lorin Briand	5
President's Report – Jim Goodridge	6
Observer's Group Report – Larry Scott	7
Chasing Asteroid 2004 BL86 – Tenho Tuomi	8
Observing Clubs and Certificates	9

# MEMBERSHIP? JOIN TODAY!

**Regular: \$82.00 /year**

**Youth: \$43.00 /year**

**Family: \$77/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](mailto: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](mailto: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:

**President** – James Gorkoff, 306-644-1343

**Secretary** – Tenho Tuomi, 306-858-2453

**Vice-President** – Jim Goodridge, 306-370-8530

**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

**Newsletter Editor** – Ron Waldron

**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 [rwmaldron@shaw.ca](mailto:rwmaldron@shaw.ca) 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.

**LIGHT POLLUTION ABATEMENT WEBSITE AT:**  
[www.ras.sk.ca/lpc/lpc.htm](http://www.ras.sk.ca/lpc/lpc.htm)

# RASC CALENDAR OF EVENTS

<b>Feb 16</b>	<b>Executive &amp; General Meeting</b>	J. Goodridge
<b>Feb 21</b>	<b>Observer's Group at Sleaford</b>	Larry Scott
<b>March 7</b>	<b>Observer's Group at Sleaford</b>	Larry Scott
<b>March 21</b>	<b>Messier Marathon at Sleaford</b>	Larry Scott
<b>March 28</b>	<b>Earth Hour at Circle Centre Mall</b>	J. Goodridge
<b>April 18</b>	<b>Observer's Group at Sleaford</b>	Larry Scott
<b>April 24</b>	<b>Astronomy Week Observing at Lakewood Civic Centre</b>	J. Goodridge
<b>April 25</b>	<b>Astronomy Week Daytime Observing at Farmer's Market &amp; Evening Presentation and Observing at Beaver Creek</b>	J. Goodridge

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



## February RASC General Meeting

for all members and guests  
Room 175 Physics Bldg  
University of Saskatchewan  
on  
Monday, February 23rd, 2015

8:00 PM

*Lorin Briand*

*will discuss plans for*

***RADIO ASTRONOMY***

*at*

***Alsask, SK***

*Note: There will be an EXECUTIVE MEETING beginning at 7:00 PM*

# Minutes of the Executive & General Meetings – January, 2015

President Jim Goodridge opened the meeting at 7 PM.

Moved by Norma Jensen and Les Dickson that the minutes of November 2014 be adopted as circulated.  
Carried.

## Committee Reports:

Fundraising Report by Jim Goodridge – gift cards will be available in the fall.  
Observing Report by Norma Jensen – the Sleaford yard has been cleared of snow.  
Newsletter Report – next deadline February 6.

Sleaford Report by Darrell Chatfield :

- Door fixed in the new shed so that it will lock again.
- A mouse hole was plugged in the shed.

Events Report by Jim Goodridge:

- Earth Hour will be March 28, 8:30 to 9:30 at the Centre Mall, bring telescopes.
- Astronomy Day will be April 24 at the Lakewood Civic Centre, and April 25 at the Farmer's Market and Beaver Creek.
- Requests for astronomy nights by Stem Fest in September/October and the Science Literacy Week September 21-27 were discussed.
- International Observe the Moon Night is September 19. No activities decided yet.

SSSP Report by Les Dickson – still working on speakers.

Saskatchewan Light Pollution Abatement Committee Report by Rick Huziak:

- Presented a lighting policy to the city which promised to respond by February or March.
- Next will present a formal policy for a dark sky preserve for the new Swale development.

## Other business:

Future meeting dates announced by Jim Goodridge:

- February 26 – Lorin Briand will talk about radio astronomy at Alsask
- March 16 – Darrel Chatfield will talk about William Herschel
- April 20 -- Dale Boan will talk about astrophotography
- May 11 --

The meeting adjourned at 8 PM

At 8:15 Ron Waldron gave a talk and show using a Digitarium portable planetarium system which was set up in the hallway of the Physics building.

# Building the Alsask Radio Observatory – Lorin Briand

## Editor's Note:

*This article by Lorin Briand was first posted in the RASC Group on October 5 of 2014. I reprint it here as a primer for Lorin's talk at this month's General Meeting*



I have judged that the time has come to make good on a plan that I have been considering for a long time. I have decided to purchase the old Alsask RADAR dome and turn it into a Radio observatory. I have been promoted at work (yeah!) which gives me the buying power to start this venture. The land is potentially, ridiculously cheap. It encompasses 6.3 acres on a hill top in near dark sky, radio quiet territory on the Alberta/Saskatchewan border. The structural condition of the building is good (the military builds things to last!) but there is a significant pest infestation.

In order to make this work, I'm going to need volunteers to come and help. Brain power help in the design and fabrication department is also appreciated. I'll be co-ordinating and living on site if the sale goes through.

Step 1 is to buy the land off the Rural Municipality. Right now the land and tower are derelict. It is assessed as being worth \$77,500.00. However, given the nature of the investment (the Radar tower must remain intact and is a historical site) AND the fact that I'm just about the ONLY person in Western Canada interested in proposing this. Thus, the council has a onetime chance to unload this white elephant.

The value proposition for the RM is that, once functional, I'll build a Visitor's Centre to bring people in (to town) and force Sasktel to FINALLY give us real high-speed internet. There are more reasons to do this (I outlined 10 in my proposal).

The inevitable question I will face is: How will you pay/get volunteers? The answer is, among other groups, YOU! Many of you volunteer at the Campus Observatory and do outreach around the province. I am asking for some to make day (night) trips here and support this mission. As for money, I'll take out a mortgage to get started. I'll set up a method to accept donations in time. I'm not hot on the idea of government money for this, as they have refused to fund a PhD for me and cut the very jobs I wanted in the first place. The track record has soured me on government funded science projects.

I hope a few of you respond positively to this request. The time to start building is now. I'll keep the club in the loop and make sure there is telescope time allotted for RASC membership. Why not? After all, I don't need proposals to pass peer review, do I?

Thanks all for your support over the last few years. You have all proven true friends.



## President's Report – Jim Goodridge

- This Month's meeting will be held on February 23 due to the Family Day Holiday on the 16th.
- We are still short a Vice-President; A National Advisory Council Rep and an Events Co-ordinator so if you are looking for something to do, and want to join the executive, please let me know.
- March 28 we will be having our Earth Hour observing at the Centre Mall outside the movie theatre's as usual.
- April 24 we will have astronomy week observing at Lakewood Civic Centre.
- April 25 we will have astronomy week observing at the Farmer's Market (Solar) during the day and at Beaver Creek in the evening. Please mark these dates on your calendars and be ready to participate.

At this months meeting, Lorin Briand will be presenting on his Radio Telescope Adventure. At the meeting we will also be discussing a letter of support for the project. Lorin also put a message on our Yahoo list as follows:

*"Hello all Astrophiles!*

*As you many of you know, I am developing a Radio Observatory out in Alsask, SK. I am building a non-profit to manage the Observatory. Right now, I'm recruiting founding Board of Directors members. The breakdown of the Board will be as follows:*

- *3 Community members, residents of Saskatchewan.*
- *1 member from the RASC resident in Saskatchewan.*
- *1 member from CASCA (not necessarily resident in Sask)*

*So, if you are interested OR would like to nominate someone from here or the Regina Centre, pass me an email at [lorinbriand@icloud.com](mailto:lorinbriand@icloud.com), on the list or at [alsaskastro@myaccess.ca](mailto:alsaskastro@myaccess.ca).*

*I need a response quickly (before the 23rd would be ideal).*

*I am looking forward to giving the presentation this month! It is already in the works with NEW pictures and an update on the project status.*

*Also, a letter of support from the club or National would be a great asset in our marketing package. Centre Executive could pass a resolution of support directing the drafting of the letter. Too late to add to the Agenda?"*

## Observer's Group Report – Larry Scott

January, 2015 turned out to be a very good month for observing. On Saturday, the 10th, I was out to Sleaford (alone) to observe comet C/2014 Q2 (Lovejoy) and it did not disappoint. Skies were clear and calm but it was a little cold at -25C. The comet's head was large and bright with a diffuse tail that I was able to trace through the sky for about 8 degrees with an 11" telescope. Moon rise came early at about 23:30 so the evening was short, just as well considering the temperature. The following weekend we had the January Observer's Group on the 17th with 4 members in attendance. Conditions were more comfortable with temperatures around -15C but the skies were not as good. Although mostly cloudy for the evening there was a large sucker hole which did give us about 45 minutes of observing, including comet Lovejoy again. It didn't stand out as well with the poor transparency but we enjoyed the view nonetheless. The following weekend, on the 24th, had a triple shadow transit on Jupiter. I set up in my driveway for this one despite some windy and very cloudy conditions. Visibility of Jupiter came and went during the evening. With the transits just minutes away the clouds thinned enough for me to see all three shadows as well as Callisto against Jupiter's surface. Full disclosure requires me to admit to seeing three shadows, but not at the same time. More you say, how about near earth asteroid 2004 BL86 which was closest and brightest on January 26th. Unfortunately I had used up all my get out of jail free cards and had to pass on that one. Hopefully everyone had an opportunity to see one or more of these events. Thanks again to all those who post their pictures and adventures on our yahoo site.

Moonless skies in February start around the 7th and continue till the 21st which is when our Observer's Group at Sleaford is scheduled for. I'll be away till the 15th so if the yard is full of snow, I'm sorry. March brings us dark skies starting around the 8th.

## Chasing Asteroid 2004 BL86 – Tenho Tuomi

The days leading up to the night of January 26/27 were active as astronomers prepared for the pass of the 300 metre asteroid 2004 BL86 from earth at three times the distance to the moon. This was to be the closest pass by any known space rock of this size until 2027. There was much flurry on the RASCALS list as members tried to predict its exact path. Sky & Telescope finally put a map on its web page that proved to be accurate though there was much debate about it at first. I downloaded the orbital elements for the asteroid from the International Astronomical Union Minor Planet Center page for my planetarium program. There was going to be a good photo opportunity as the asteroid was predicted to pass through the Beehive cluster M44 at 11 PM local time, so I made sure my camera battery was fully charged.

The day for it was mostly clear. I started looking for the asteroid at about 8:30 but did not find it by the time the clouds rolled in at 9:30 as could have almost been predicted for any important astronomical event. As it turned out, I was relying too much on my own planetarium program which was out by half a degree for the path, just outside the view of my 12" telescope's eyepiece.

However the clouds rolled off after midnight, after the asteroid had passed M44. I quickly set up my camera on the 80mm telescope in the observatory, did a hurried focus and pointed it to where I thought

the asteroid should be, and started it at 1:19 to take 30 second exposures for the next hour. The sky was so clear that after confirming that the first 34 pictures had the asteroid in them, I put the pictures aside and spent a couple hours looking for Herschel 400 II galaxies instead.

However the real excitement was only beginning. . After midnight Rick had posted on the Saskatoon list that he and Dale Boan had been to Sleaford to look for the asteroid. He had seen it visually and Dale had been able to take pictures of it. So after finding that I had pictures, I had posted a note on the Saskatoon list also saying so. Next morning Rick forwarded to me an email from Randy Attwood at the National office looking for pictures of the asteroid for the RASC site and press release. I quickly put together the 17 minutes of 34 pictures into a 7 second animated gif, 5 pictures to a second, and sent that to Randy. Soon afterwards I had an email from CTV-Toronto asking for an interview. Randy emailed later that my video had been on their TV for a while but had been soon replaced by the wonderful picture from NASA of the asteroid with its little moon. Hard to compete with NASA.

At noon I posted a note on the RASCALs list saying I had pictures of the asteroid and received several requests for permission to show it at their meetings. Then I had a phone call from CTV-Regina asking for an interview. Then the Rosetown Eagle asked for an interview.

By afternoon Dale Boan had a video ready of 9 pictures that he had been able to take at Sleaford. Larry McNish from Calgary had been able to take a video through some clouds, and Vance Petriew from Regina had a good video of the asteroid. Garry Stone sent me three pictures he had taken at 3AM with a75mm lens with M44 at the bottom. I found the asteroid in his pictures and made a little video of it.

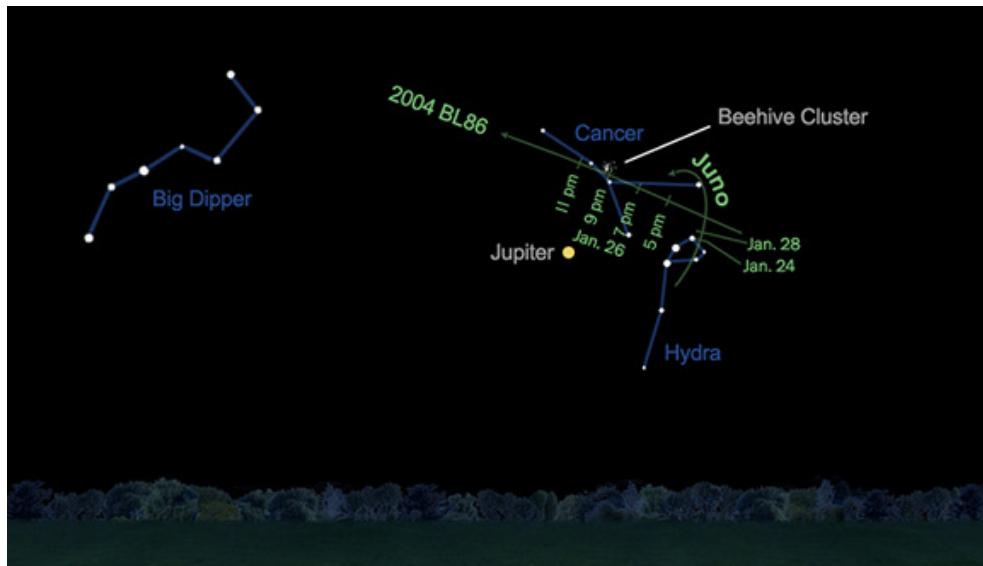
It seems that almost all of Canada was clouded out for the event and the only sightings or pictures were five from Saskatchewan (four from our Centre) and one from Alberta. It was our day, or night.

Find my video at <http://www.lex.sk.ca/astro/350d/2015.htm>

Dale Boan's at <http://vimeo.com/117973237>

Vance Petriew <https://www.facebook.com/theRoyalAstronomicalSocietyofCanada>

I don't know how long these links will be valid.



*Through large binoculars and telescopes, near-Earth asteroid 2004 BL86 skimmed the edge of the Beehive star cluster. Image via NASA/JPL-Caltech*

# 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. Hydomako, T. Tuomi, L.  
Scott, G. Charpentier, B. Johnson, M.  
Clancy, L. Dickson, B. Burlingham, K.  
Houston, Norma Jensen

Ron Waldron	105
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	Done!	110
Scott Alexander		97
Norma Jensen		72
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	Done	55
Jim Goodridge		35
Sharon Dice		31

## Isabel Williamson Lunar Observing Certificate

### Certified at 140 Objects:

T. Tuomi

Norma Jensen	133
Jeff Swick	29



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.astroleague.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>