

# Saskatoon Skies

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

Vol. 45, No. 6

June 2014



*This picture was taken by Tenho Tuomi at the Saskatoon Centre's Farewell for departing member Barb Wright. The come and go barbecue was held in the backyard of Les and Ellen Dickson. Tenho explained to me that in order to get everyone in the photo, he had to copy and paste one of the members. Can you spot who it is?*



Saskatoon Centre  
The Royal Astronomical Society of Canada  
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<http://www.rasc.ca/saskatoon>

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

<http://homepage.usask.ca/~ges125/rasc/newsletters.html>

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# 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 <national@RASC.ca>!

## 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, 644-1343  
**Secretary** – Tenho Tuomi, 306-858-2453  
**Vice-President** – Jim Goodridge, 370-8530  
**Treasurer** – Norma Jensen, 244-7360

**Bottle Drive &  
Canadian Tire \$**  
By Colin Chatfield

If you cannot make it to a meeting but would like to contribute your Canadian Tire money please call me at 934-7046.

**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. **Articles can be sent by mail in any format to the Centre's mailbox.** Submitted materials can be returned upon request. Submissions may also be sent by e-mail to the editor at [rmwaldron@shaw.ca](mailto:rmwaldron@shaw.ca) as a .doc, no indents, no tabs, one line between paragraphs. 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. **DEADLINE for submissions** for each month's issue is the 1st Friday of the month. Saskatoon Skies accepts commercial advertising. Please call the editor 306-665-3392 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

June 16	RASC Executive and General Meeting	Jim Gorkoff
June 16-29	RASC General Assembly – Victoria, BC	Victoria Centre
June 28	Observer’s Group at Sleaford	Larry Scott
July 26	Observer’s Group at Sleaford	Larry Scott
Aug 21-24	18 <sup>th</sup> Annual Saskatchewan Summer Star Party – Cypress Hills, Sask.	Les Dickson
Sept 15	RASC Executive and General Meeting	Jim Gorkoff
Sept 19-21	Alberta Star Party – Drumheller, Alberta	<a href="#">Alberta Starparty</a>
Sept 23-28	Prairie Northern Star Party – Tofield, Alberta	Edmonton Centre
Sept 27	Observer’s Group at Sleaford	Larry Scott

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



## General Meeting

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

Monday, June 16th at 8:00 PM

### Program

One of our newer members to present their thoughts on their first year of RASC membership. They have promised to be gentle.

**Note:** *there will be an Executive meeting at 7:00 PM*



## Minutes of the May Meeting – *James Gorkoff*

Jim Goodridge and Jim Gorkoff were the only executive members present along with three regular members. At 7:15 the two executive members present decided that not enough executive was present to conduct a proper meeting so no meeting was called to order and all of the agenda items were put off to next month. Informal committee reports were received from Jim Goodridge respecting Fundraising, Events and SSSP:

Fundraising – The Sobeys fundraiser will be conducted in the fall;

Events – May 23 – observing night

May 24 - Nature City Farmers Market event 10:a.m. to 2 p.m.; Rick, Jim and Barb attending;

SSSP – everything in line.

No formal Membership Meeting but Jim Goodridge presented examples of do it yourself astronomy projects including:

- Turning a really bad telescope into something useable;
- Making your own image stabilized binocular (no batteries – but you will be surprised);
- Making a diffraction grating Spectrometer from a CDROM or DVD; and
- Homemade Astrolabe.

## What I Am Seeing on Mars – *Tenho Tuomi*

By the time you are reading this, Mars will have shrunk from its opposition size of 15 arcminutes in April to 10 arcminutes, but maybe there still is some interest in observing it.

When observing or photographing Mars the question is often asked, “What are the features that I am seeing?” I have found two good sources to answer the question.

The first is a Sky & Telescope website called Mars Profiler,

[http://www.skyandtelescope.com/wp-content/observing-tools/mars\\_profiler/mars.html](http://www.skyandtelescope.com/wp-content/observing-tools/mars_profiler/mars.html)

It shows a flat map of the side towards earth with all the major features labelled. Time is entered in UT.

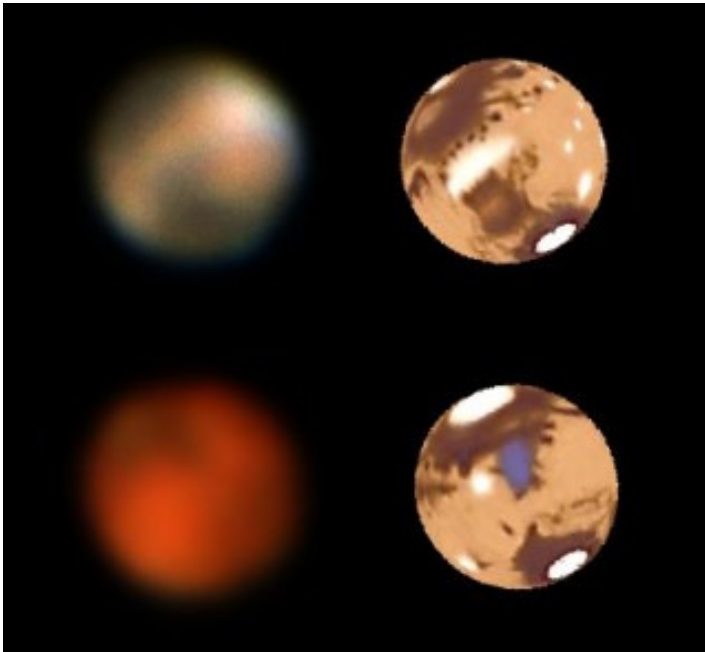
The second is a program called Mars Previewer II that can be downloaded from Sky & Telescope’s freeware page,

<http://www.skyandtelescope.com/astronomy-resources/freeware-from-sky-telescope>

or direct from, <http://mars-previewer-ii.software.informer.com/>

The advantage of this program is that it shows Mars as a globe, as seen in the eyepiece or picture. Hold cursor over a feature to see labels. Enter local time. Enter time zone as a positive number.

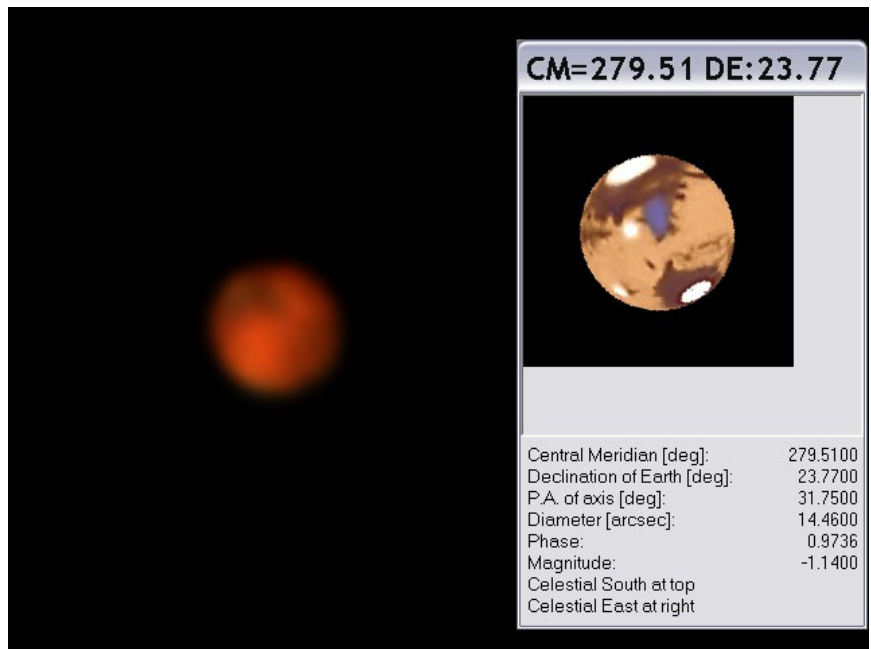
Here are a couple of examples of pictures by Garry Stone and me. In each case South is to the bottom and East to the right as seen with a Newtonian telescope. Left pictures are what we photographed and right pictures are what Mars Previewer shows for that time.



Top line shows Mars as I photographed it on April 21 at 00:14 AM with a Canon Rebel camera. The North polar cap, not visible, is on the bottom and to the right. The dark areas are Mare Acidalium on the bottom and Mare Erythraeum on top, formerly thought to be seas. The white area on the right in the picture might be clouds.

The second line shows Mars as photographed by Garry Stone on May 1 at 9:27 PM with a Konica Minolta camera. The prominent dark feature on top is Syrtis Major, a shield volcano. The white area on top is not the polar cap, but Hellas Planitia, a light colored plain within the crater Hellas, one of the first features discovered on Mars.

Here is the picture that Garry sent that he took of Mars on May 1 at 9:27 PM. I enhanced the picture a bit and put beside it a screen print from a program called Mars Preview II (downloaded from Sky & Telescope) showing what Mars should have looked like at that time. The black area on top is Syrtis Major. I assume South is up and East is to the right in Garry's picture. It seems to match. The bright area on top is Hellas, not the polar cap. The North polar cap should be on the bottom but not seen in Garry's picture.



## Comets for 2014 - *TenhoTuomi*



2013 was a good year for comets, though none really naked eye for the general public. Two caught the Media's attention, C/2011 L4 (PANSTARRS) in the spring and C/2012 S1 (ISON) in the fall. A third one in the fall, C/2013 R1 (Lovejoy), was the best one but was ignored due to all the attention given to ISON which fizzled anyway. A fourth fainter one, C/2012 X1 (LINEAR), was a surprise for it became brighter than expected. There were also six other fainter comets that I was able to photograph, a new record for the number of comets I photographed in one year.

This year started with comets Lovejoy and LINEAR as morning comets, but even though fading they still were the brightest comets in the winter and spring sky.

The early summer comet will be C/2012 K1 (PANSTARRS) which was discovered over two years ago. It has been slow in coming, but is expected to reach magnitude 8 in Leo Minor by June. It will be below the horizon before it reaches its maximum brightness in the fall. It could have been a great comet but it is staying far from earth during its passage.

A new comet, C/2014 E2 (Jacques) was discovered only in March. It is low in the west in the evening but after its perihelion passage in July, it is expected to reach magnitude 8 in Cassiopeia this fall. It could be our comet for the SSSP.

Comets look pretty sparse for this year but we can always hope for a new comet. Comet Lovejoy became a naked eye object only two months after its discovery.

Picture:

Caption: Two baby comets photographed April 20, C/2011 L4 (PANSTARRS) in Bootes on the left and C/2014 E2 (Jacques) in Monoceros on the right. They are expected to grow to telescope or maybe binocular objects by this summer or fall.

## Notes from Above Ground – Norma Jensen

At last, the observing drought is broken. My last observing session was November 29th with extreme temperatures preventing any further viewing until late March. On March 22nd it was minus 10 to minus 15 with little wind, clear and frosty. Galaxy hunting. A quiet night, no other observers, cars, or aurora. Birds and Coyotes sleeping. Perfect. The highlight was a fireball/space junk phenomenon at 22:05 which crossed in the East from North to South to disappear below Hydra. It was a slow round yellow ball with no tail, no breakup. Here - 10 seconds - gone.

Picked up a second evening on March 28th at a balmy minus 7, frost free. Looked at old favorites (2903 in Leo) and found a few new galaxies: 3184 in the Bear's paw and 3877 by Chi Ursa Major. A stunning Ghost of Jupiter 3242 in Hydra. About to move to the Spindle galaxy in Sextans, the skies quickly clouded and viewing was over. Short and bitter-sweet.

### Editor's Note:

*Since submitting this article, Norma and a number of other members had a very successful observing session at Sleaford the evening of Friday, May 23<sup>rd</sup>. Attempts were made to view the Camelopardalids Meteor Storm that night. Although some meteors native to the shower were seen it certainly did not rate "storm" status. In Norma's own words, the Camelopardalid meteors were "profoundly absent".*

## No Summer Issue of SASKATOON SKIES

**As viewing opportunities are scarce in June and July and articles submitted even more scarce, there will be no summer issue of Saskatoon Skies again this year. See everyone at Cypress Hills and SSSP in August and/or at our first regular meeting on September 15<sup>th</sup> in the fall !**



# Sky Buys and Mirror Cells

## FOR SALE:

**CELESTRON CELESTAR 8" DELUXE TELESCOPE C/W 2" METAL TRIPOD, WEDGE, FINDER, EYEPIECE - \$2400.00**

### ADDED UPGRADES:

FEATHER TOUCH FOCUSER - 250.00  
WILLIAM OPTICS 2" DIAGONAL - 200.00  
FLOCKED DEW SHIELD - 100.00  
TELRAD - 55.00  
BOBS KNOBS - 40.00  
DRYEYE DEW HEATER - 150.00  
MAIN SCOPE CASE - 150.00  
TRIPOD CASE - 80.00

TOTAL VALUE - \$3425.00      WILL SELL FOR \$1500.00

This scope is in excellent shape! It has seen many objects, such as the Finest NGC's, the Herschel I and some of the II's. This particular scope was 'recommended' by a former Celestron employee some years ago now. He happened to be visiting our SSSP at that time, so after meeting him, he politely came and looked through my telescope. He gave it an excellent optical review! Set this scope on an object, and it will track perfectly for hours. Please call **Darrell at 374-9278** for more information. I will consider serious offers. Thank you.

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**CELESTRON SKY MASTER 20 X 80 BINOCULARS - \$75.00**

This item is in excellent shape. Provides great views of the skies. Used twice! Please call **Darrell at 374-9278** or [novachat@sasktel.net](mailto:novachat@sasktel.net) for more information. Thank you.

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## FOR SALE

1-EN5-20/0 Eyepiece 20.0 mm Nagler Type 5 \$539.95  
1-EN4-12/0 " 12.0 mm " Type 4 \$429.95  
PMt - 2200 Powermate 2.0x \$359.95  
Green Lazer Pointer \$99.95  
2ND13 2" Density Filter \$29.95

11069 Nextstar 8 SE Celestron \$ 1349.95  
18774 Power Tank 7 AH-12V \$74.95  
04200 FlexSheild \$39.95  
07722 Solar Filter \$139.95  
93527 Diagonal 2" XLT-SCT \$169.95  
LC Laser Collimator w/sideview \$ 49.95  
15188 Scope Cloak \$ 79.95

#7675  
07227 EZ Finder \$ 69.95  
FURB Red Dot Finder \$ 9.9  
#7056  
92110 Observing chair ( Not used ) \$ 129 95  
#13756  
94005 Celestron StarSense \$ 349.95

Asking \$ 2300.00 for the package. Offered as a package only, not as individual pieces.

Contact Info:  
Percy at 250-594-5858  
or email [ye7cul@shaw.ca](mailto:ye7cul@shaw.ca)



## Observer's Group Notes – *Larry Scott*

Hooray for the Comet 209P/LINEAR meteor shower on May 24th! Although the number of visual meteors observed was fewer than hoped, the predicted timing of the shower was nearly spot on. The fact that some crafty folks with slide rules were able to correctly predict the arrival of this shower, without it having been observed before, is very cool. My favourite part of the shower was its ability to drag a dozen members and guests to Sleaford on a gorgeous summer night. Skies were clear, temperature was perfect and there were only a few mosquitoes to contend with. There was a nice parade of planets while we waited for darkness to arrive - Mercury, Jupiter, Mars and Saturn. Around 23:30 a curious shaft of bright light started near zenith. It grew longer and fainter as it traveled towards the northern horizon to join with some faint aurora. It was an unexpected sight which generated several guesses as to its nature and a flurry of internet sleuthing in the following days. This, I believe, turned out to be a Japanese satellite dumping excess rocket fuel. I hope everyone enjoyed their evening at Sleaford.

The next weekend provided a similar evening on May 30th but we were only able to muster two bodies out to Sleaford. This night the seeing turned out to be very good and we jumped around looking at globular clusters using very high powers. By 02:00 we noticed the sky was brightening already and packed our toys away.

Next Observer's Group is scheduled for June 28th and is really just an excuse to cut grass. The skies will go from evening twilight to pre-dawn twilight without ever getting truly dark in June. Nevertheless, the summer sky is beautiful and I would like to encourage your participation. In July we will get back to some dark skies with moonless evenings from July 21st till August 3rd and an Observer's Group scheduled for July 26th.

## Comets for this Summer – *Tenho Tuomi*

We will have two news comets to look at this summer.

In October an asteroid was discovered and named 2013 UQ4. From the start it looked odd for an asteroid for it had a long retrograde orbit, more like a comet. A May 7 photograph showed that it had turned into a comet, and it was renamed C/2013 UQ4 (Catalina). This comet will be brightest on July 10 when it passes closest to earth with a predicted magnitude of 7, not naked eye but a good binocular object. Start looking for it at the beginning of July under moonless skies when it rises into the Andromeda constellation. By the 10<sup>th</sup> it will be in Cepheus and travelling 7 degrees a day. By August it will be fading fast.



*Comet C/2012 K1*  
*Photo by Tenho Tuomi*

The next comet to look forward to will be comet C/2014 E2 (Jacques) which was discovered only in March. After its perihelion passage in July, it is expected to reach magnitude 8 in Cassiopeia this fall. It could be our comet for the 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. 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	110
<b>complete</b>	
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	Up!	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
Sharon Dice		31
Jim Goodridge	Up!	35

## Isabel Williamson Lunar Observing Certificate

### Certified at 140 Objects:

*T. Tuomi*

Norma Jensen		133
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	Done!	400
Rick Huziak		246
Tenho Tuomi		240

## 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.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>