Saskatoon Skies

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

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This stunning photo of Comet PanSTARRS was taken by local member Dick Kirk in mid April from our Sleaford Observing Site and was featured on The Weather Network. The camera was a Nikon D5000 at prime focus on Edge 8 in. no guiding. Best 21 of 28 60 sec ISO 6400, DSS for stacking CS5 for processing. Sky background was 20 % at midnight.

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To view *Saskatoon Skies* in colour, see our Website:
http://homepage.usask.ca/~ges125/rasc/newsletters.html

In This Issue:

MEMBERSHIP? JOIN TODAY!

Regular: $80.00 /year **Youth: $41.00 /year** **Associate: $33 /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
- 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.

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.

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

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 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 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.

RASC CALENDAR OF EVENTS

May 11	**Observer's Group at Dusk - Sleaford Observatory**	Larry Scott
May 13	**RASC General Meeting – 175 Physics Bldg**	
May 20	**Executive and General Meetings-175 Physics-U of S**	Jim Gorkoff
May 25	**Nature City Festival-Solar Observing at Farmer's Market 8:00 AM – 2:00 PM**	Barb Wright
May 28	**Comet C/2011 L4 (PANSTARRS) passes less than 5 degrees from Polaris.**	
June 8	**Observer's Group at Dusk - Sleaford Observatory**	Larry Scott
June 15	**RASC Wind-up Bbq at Jim Goodridge's Acreage**	J. Goodridge
June 17	**Executive and General Meeting-175 Physics-U of S**	
July 6	**Observer's Group at Dusk – Sleaford Observatory**	Larry Scott

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

General Meeting for all members

May 13th at 7:30 PM

Room 175 Physics Building
University of Saskatchewan

PROGRAM

"You Can Almost Touch the Stars"

Simple Spectroscopy

by

Dr. Tom Field

of

Field Tested Spectroscopy

Note: there will be an executive meeting at 6:30 PM

About this Month's Guest Speaker and Topic

Even if you wanted to touch a star, they're impossibly distant. But despite these great distances, researchers have learned a great deal about quite a few stars. How? The most common method to study the stars is called ***spectroscopy***, which is the art and science of analyzing the colorful rainbow spectrum produced by a prism like device.

Until recently, spectroscopy was too expensive and too complicated for all but a handful of amateurs. Today, though, new tools make spectroscopy accessible to almost all of us. You no longer need a PhD, dark skies, long exposures, enormous aperture … or a big budget! With your current telescope and FITS camera (or a simple web cam or even a DSLR without a telescope) you can now easily study the stars yourself. Wouldn't you like to detect the atmosphere on Neptune or the red shift of a quasar right from your own backyard?

This talk, with lots of interesting examples, will show you what it's all about and help you understand how spectroscopy is used in research. And, it will show you how to get started.

Dr. Tom Field of Field Tested Systems is a Contributing Editor at Sky & Telescope magazine. Tom's first article in the magazine appeared in August 2011 on the topic of spectroscopy. He's the author of the RSpec software (www.rspec-astro.com) which received their "Hot Product 2012" award last year. Tom is a popular speaker who has spoken at many different venues, including NEAF, the NEAF Imaging Conference, PATS, the Winter Star Party, the Advanced Imaging Conference, SCAE, and others. His enthusiastic style is lively and engaging. He promises to open the door for you to this fascinating field! For questions, email Tom at info@rspec-asto.com.

April Executive Meeting Minutes *by Tenho Tuomi*

Minutes of the March 18 Executive meeting, moved by Les Dickson and Rick Huziak. Carried.

Vice-President's report by Jim Goodridge
- Windup BBQ at the Goodridges on June 15.
- Sobey's gift cards delayed to next week.

Centre Rep report by Rick Huziak – new RASC by-laws and manual approved at the March 23 meeting, need a meeting with the executive and James Edgar as soon as possible to discuss them.

Yannis Pahatouroglou gave a report on a desire by the University to partner with the Centre for outreach into schools using the University equipment. This would promote astronomy and expose students to different levels of astronomy. Possibly two meetings could be held in the schools, two at the University telescopes on campus, and two at Sleaford.

Meeting adjourned at 7:20 PM

April General Meeting Minutes *by Tenho Tuomi*

Chairman Jim Gorkoff opened the meeting at 7:30 PM – one visitor was acknowledged.

Minutes of the March 18 General meeting.

Correction to April 19 and 20 Astronomy Day events, should start at 8 PM. Moved as corrected by Jeff Swick and Ellen Dickson. Carried.
Committee Reports.

Vice-President's report by Jim Goodridge:
- Thanks for the volunteers at the April 13 Market Mall event.
- We now have five volunteers for the U of S observatory on Saturday nights.
- Need more information about the history of the U of S observatory.
- NeuralNet at Market Mall has good astronomy gear sales.
- Speaker for May, Dr. Tom Fields
- Speaker for June, Ron Waldron
- June 15 Windup BBQ at the Goodridges.
- Sobey's gift cards delayed to next week.

Membership report by Mark de Jong – 68-69 members

Newsletter report – deadline May 3.

Sleaford Site report by Darrel Chatfield
- Met with the U of S to discuss site of new shed, suggestion that shed should go near the old school to make use of the power that is there. Final decision to be made after snow goes.
- Goal to get new shed up before next winter.

Events report by Barb Wright:
- April 13 meeting at the Children's Discovery Museum went well with Ron Waldron and the Starlab fully pre-booked, and Kathleen Houston with the art activity.
- April 19 Astronomy Day at the Civic Centre.
- April 20 Astronomy Day at Beaver Creek with Ron Waldron as speaker.
- April 20 City Dark showing at the Film Festival at Roxy's.
- May 25 Astronomy Day at the Farmer's Market with the Nature City Festival.

Discussion on where to keep handouts so that they are available and amounts known. Suggestion to keep them in the U of S observatory.

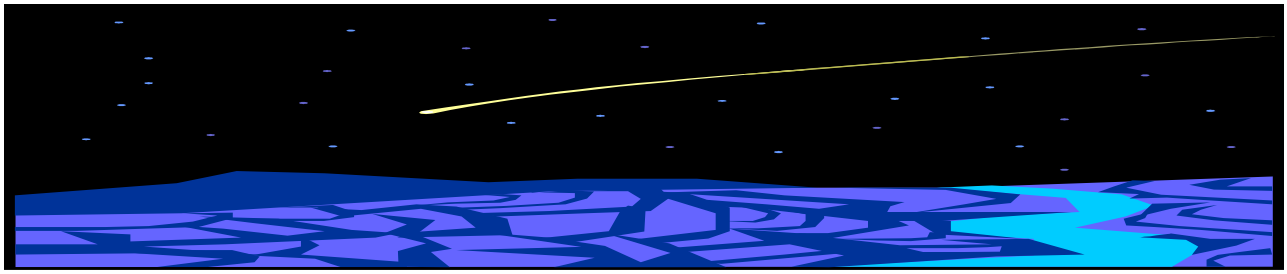
SSSP report by Les Dickson
- Registration is open.
- Book rooms before the end of April, half of unbooked rooms available to end of May.

Centre Rep report – Bylaws approved by National Council on March 23, The Centre needs new bylaws to match.

Partnering with the U of S for outreach into schools was discussed. A commitment is needed from the Centre before summer.

Meeting adjourned at 8:35 PM.

Dr. Erica Bird gave a talk about the Children's Discovery Museum which is at Market Mall and in other parts of the continent, and about its plans to expand to the Mendal Art Gallery if possible, even with a planetarium.



Astronomy Day / Week Activities

We had a great day at Market Mall to kick off astronomy week activities. Ron Waldron ran the STARLAB inflatable planetarium all day. Kathleen Houston ran an astronomy focused art activity and Barb Wright and Christine Kulyk ran a RASC information table. The Children's Discovery Museum set everything up and secured space, tables and chairs from Market Mall; the STARLAB from the Saskatoon School Division; and pre-booked all of the STARLAB shows. They also provided volunteers to help with STARLAB and the art activities. The turnout was fabulous as all of the shows were fully booked and I heard comments that people had never seen that many kids in Market Mall at one time. Market Mall and the Saskatoon School Division were extremely generous with their donations of space and equipment.

A big thank you to Ron, Kathleen, Barb and Christine for working so hard and making this day such a success.

The Children's Discovery Museum and their President Erica Bird, and Manager Tracy Straub, are great partners of ours and I cannot thank them enough for all of the effort they put into this day.

Jim Goodridge

Clouded out for Lakewood on Friday, April 19th, but there was a hardcore group of centre members ready for action

Jeff Swick

Clouded out at Beaver Creek on Saturday, April 20th but Jeff took some pretty photos of the large snowflakes falling in the area

Editor

Adventures of a Comet Photographer *by Tenho Tuomi*

Comet C/2011 L4 (PANSTARRS) was the brightest naked eye comet for us in the Northern Hemisphere since comet C/2006 P1 (McNaught) in January 2007. Those in the Southern Hemisphere saw it first. I had a good time photographing it from the time it first appeared above the horizon for us on March 13 in bright evening twilight.

Up to April 22 I took pictures of it on fifteen different nights, at every opportunity. At the beginning it was so low that I had to drive down the road to find a clear horizon to the west to take pictures. Eventually it moved high enough that it was visible in the mornings and seen from my observatory.

This selected series of pictures shows how its tail grew in size and then starting diminishing as the comet drew away from us, reaching a maximum as it passed the Andromeda galaxy on April 4. The pictures, though taken with lenses and telescopes ranging from 200 to 1500mm focal length, are all scaled to the same size as if taken through a 400mm focal length telescope. The first three pictures are short exposures up to 4 seconds taken in bright evening twilight or moonlight, so do not show as much tail for that reason. The rest of the pictures were taken in dark skies with exposures of 30 or 60 seconds. All pictures from March 25 on are stacked multiple pictures.

Observer's Group Notes *by Larry Scott*

The Observers Group for April 6th was cancelled due to weather conditions. This was followed by two gorgeous nights for observing. Three members were out on April 8th under very good skies and four members were out again the next night. The temperature both nights went to near -15C with better transparency on the 8th and better seeing on the 9th. Jupiter was still high enough in the west for some early evening viewing followed by galaxies and globulars. Comet C/2011 L4 (PANSTARRS) had become circumpolar and was still visible near the horizon at 01:30 in the morning. Looking forward to seeing it again in May as it will be higher in the sky.

F
rom left to right Norma Jensen., Larry Scott. and Ron Waldron's dobs at Sleaford Dark Site

Budding new member Kathy Gallenger joins Ron Waldron at Sleaford with her new 8" dobsonian telescope

Depending on when you read this, next Observers Group is scheduled for May 11th with moonless evenings from now till about May 12th or June 8th with moonless evenings from May 31st till June 13th.

The Five Visible Planets This Month

adapted from Earthsky.org

Jupiter (dusk until mid-evening). It'll be hard to miss Jupiter blazing away in the western sky after sunset. This world ranks as the fourth-brightest celestial body after the sun, moon and the planet Venus, respectively. Venus is low in the west after sunset in May, not far from Jupiter on the sky's dome. But Jupiter is much easier to see than Venus because, while Venus slips below the horizon soon after sunset, Jupiter stays out until about an hour after dark for the most of May. Look for the moon to pass close to Jupiter on **May 11, May 12** and **May 13.**

Some people describe Jupiter's color as *cream-colored*. You can glimpse one or more of Jupiter's four largest moons with binoculars, if you hold them steadily. Try propping them on your knees, or the hood of your car. With only a modest backyard telescope, you can easily see Jupiter's moons. In order outward from Jupiter, they are Io, Europa, Ganymede and Callisto. Watch over several nights, and you'll see them change position as they move in their continual orbit around Jupiter.

Watch Jupiter while you can. It sets in the west at mid-evening in early May, but by the month's end, it'll be setting before nightfall. In June, Jupiter will disappear in the sunset glare. Earth's faster motion in orbit will bring the sun between us and Jupiter on June 19, 2013, at which time Jupiter will officially pass out of the evening sky and into the morning sky. The planet will return to view in the east before dawn in July.

Saturn (dusk until dawn). Saturn is no match for Venus or Jupiter in brightness, but it's still as brilliant as the brightest stars. It shines like a gentle beacon in the May 2013 night-time sky. Earth flew between the sun and Saturn late last month (April 28), and so this month Saturn is out nearly all night, in a good place to observe. Look for Saturn in the east as darkness falls. It climbs highest up for the night at late evening, and sets in the west at or close to dawn.

Just as it did last year, Saturn is still shining relatively close to Spica, the brightest star in the constellation Virgo. You can distinguish Saturn from Spica by color. Saturn shines with a *golden* hue while Spica sparkles blue-white. Binoculars help to accentuate color if you have difficulty discerning the difference with the unaided eye. Watch for the moon to swing close to the ringed planet Saturn on **May 21** and **May 22.**

Venus (dusk). Venus, the brightest planet is officially in the evening sky throughout May 2013. It's low in the western twilight. When will you see it? That depends on the clarity of your night sky, and on how free your western horizon is of trees and tall buildings. This evening apparition of Venus, which is only now beginning, will be good for the Northern Hemisphere observers, and awesome for our friends in the Southern Hemisphere. It's the brightest planet! The planet of love. How can anyone not enjoy Venus when it's in the evening sky?

Mercury (dusk, starting mid-May). Like Venus, Mercury is climbing upward from the glow of evening twilight in May 2013. Mercury is fainter than Venus and probably won't become visible in the twilight sky until the second half of May, though. Then, in the last week of May, three worlds – Venus, Mercury and Jupiter – will rendezvous in the western twilight sky to create a beautiful *planetary trio* – a gathering of three planets that are less than 5^{o} apart on the sky's dome. That's less than the width of three fingers at an arm length.

Mars (not visible in May 2013) Mars was behind the sun from Earth last month, and it is still lost in the sun's glare as we gaze in its direction in May 2013. The Martian cycle of visibility in Earth's sky is about two years long. That cycle will begin anew when Mars returns to the eastern sky before dawn in late June 2013.

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	109
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

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		61
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

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: **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**