

# Saskatoon Skies

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

Vol. 42, No. 11

November 2011

## SLEAFORD OPEN HOUSE 2011!



**The brave RASC Saskatoon Centre crew before the massive convoys from Saskatoon, Oct. 22nd!**

Congratulations on such a successful event! Thank you to the U of S students, RASC Saskatoon Centre members and general public for an amazing night under the stars! *Photo by Jeff Swick*



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

# MEMBERSHIP? IT'S NEVER TOO LATE TO JOIN!

**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](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** – Jeff Swick, 373-3902  
**Secretary** – Ron Waldron, 382-9428  
**Vice-President** – James Gorkoff, 644-1343  
**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** – Kathleen Houston  
**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 [e.b.a@sasktel.net](mailto:e.b.a@sasktel.net) 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.

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.

**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>Nov 19</b>	<b>Observers Group</b> – Dusk, Sleaford Observatory	Larry Scott	934-5801
<b>Nov 21</b>	<b>RASC Executive Meeting</b> - 6:30 pm, 175 Physics, U of S	Jeff Swick	373-3902
<b>Nov 21</b>	<b>RASC General Meeting</b> - 7:30 pm, 175 Physics, U of S	Jeff Swick	373-3902
<b>Dec 17</b>	<b>Observers Group</b> – Dusk, Sleaford Observatory	Larry Scott	934-5801
<b>Dec 19</b>	<b>RASC Christmas Potluck Social</b> - Room 175 Physics building, University of Saskatchewan - Bring a potluck dish & meet the club. Begins 6:30 pm.	Jeff Swick	373-3902
<b>Jan 16</b>	<b>RASC Executive Meeting</b> - 6:30 pm, 175 Physics, U of S	Jeff Swick	373-3902
<b>Jan 16</b>	<b>RASC General Meeting</b> - 7:30 pm, 175 Physics, U of S	Jeff Swick	373-3902

For a complete list of club events, please check out: <http://homepage.usask.ca/~ges125/rasc/activities.html>



## RASC SASKATOON CENTRE

**MONDAY, November 21, 7:30 PM**

*Room 175, Physics Bldg., U of S*

"Universal Health Care: Magnetic Resonance Imaging for Astronauts Flying to the Space Station and Beyond"  
by Gordon Sarty

"Deep Sky Imaging with a DSLR Camera".  
by Tenho Tuomi

Tenho will talk about his experience using his Canon Rebel camera for deep sky imaging, and share some helpful hints.

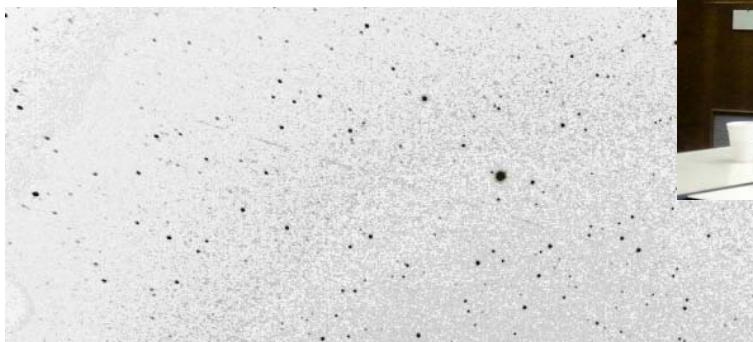
*Note: There will be an Executive Meeting at 6:30 pm.*

Jim Gorkoff hands Tenho Tuomi his gift from the club, in appreciation of his eight years as editor of Saskatoon Skies. October 17, 2011.

*Photo by Jeff Swick*



2005YU\_30. 11<sup>th</sup> magnitude asteroid observing challenge! Nov. 8/11. Photo by Tenho Tuomi



# Minutes of the Executive Meeting, October 17, 2011

by Ron Waldron

1. Meeting was called to order at 6:30 PM
2. Approval of minutes of the September 2011 Meeting - moved by Ron Waldron and seconded by Rick Huziak
3. Treasurer's Report: Norma Jensen - nil report
4. Committee Reports
  - Fundraising Report - nil report
  - Centre Rep. Report – Rick Huziak
    - National is offering extended insurance (optional) for major centre events.
    - We (esp. Jim Gorkoff) will have to take a closer look at our constitution to bring it in line with new federal government guidelines and expectations.
  - Sleaford Site Coordinator Report-Darrell
    - The grass must be cut prior to the Sleaford Open House.
    - Ceiling panels and panels around the main door have been completed.
    - A mouse was spotted in the warm-up shelter and has been dealt with.
    - New carpet will be (for the walls) dealt with at a later date (likely spring).
  - Darrell posted on the board, garage package prices for three differing sizes of garages to be built at the Sleaford site. They all included concrete pad but no electrical, heat, insulation or eaves troughs. The sizes were 26' X 36' \$36,984.00, 32' X 40' \$50,332.00, and 40' X 40' \$61,752.00. Studs will be 16-inch on centre. Prices and specs are supplied by the Coop Home Centre.

- Members suggested that we should consider insulation and heat in the near future to make the garage (classroom) available on a year round basis.
  - Discussion as to exact location followed. Members attending the Sleaford Open House will look at the site closely to determine possible locations.
  - Events Coordinator Report - Jeff Swick
    - Rick reports that the 16 " Meade will be ready for use at the Sleaford Open House - Rick will operate.
    - Barbecue and tank are out there and may be used for the barbecue before the open house. The barbecue starts at 4:00 PM and the Open House begins around 7:45 PM.
    - Site Captain for the Open House at Sleaford is Darrell Chatfield.
    - Schoolhouse cannot be used even though the heaving problem had resettled. The floor has mice and mice droppings that cannot be cleaned effectively in time for the open house.
    - A tent will be setup between the Warm-up Shelter and the Patterson dome to house the coffee and the doughnuts.
  - Membership: Mark De Jong - nil report.
  - Light Abatement - Rick Huziak
    - Meeting with the city is being planned sometime within the next two weeks.
    - Grasslands National Park wishes to partner with us to offer star nights in the future.
  - 5. Other Business
    - December meeting will be held on Monday, December 19th.
6. The meeting was adjourned at 7:30 PM.

# Minutes of the General Meeting, October 17, 2011

by Ron Waldron

1. Meeting was called to order at 7:40 PM.
2. Approval of minutes of the September 2011 meeting - moved by John and seconded by Mike Clancy.
3. Committee Reports:
  - National Rep report - Richard Huziak
    - see minutes of Executive meeting
  - Activities - Jeff (open house)
    - see minutes of Executive meeting
  - Sleaford Site Report – Darrell Chatfield
    - see minutes of Executive meeting
  - SASKATOON SKIES

- Cypress media coverage video (roughly 5 min.)
  - Rick Huziak showed members present the video *A New View of the Stars at Cypress Hills* (a YouTube video.)
- Sleaford Open House – Jeff Swick
  - see minutes of Executive meeting.
- Newsletter – Tenho Tuomi
  - deadline for the next edition of the Newsletter is November 1st.
  - Tenho was recognized for 8 years of service as editor by Jim Gorkoff and centre members.

Nominations and election of the 2011/2012 Executive (see published list below).

- Jim Gorkoff moved nominations cease and Mike Clancy seconded it.

- Great White North Astronomy Forum (possible new home instead of Yahoo). Jeff Swick showed this new website and astronomy forum to the membership.

**Presentation** - Michael Clancy presented a talk entitled *Stories in Stars*. (Secretary note: Mike gave a stirring rendition of Robert Service's *Cremation of Sam McGee* to begin his talk - verbatim from memory.)

Chris Martin moved the meeting adjourn. The meeting was adjourned at 9:05 PM.

## Executive for 2011 / 2012

\*President - Jeff Swick

\*Vice President - Jim Gorkoff

\*Secretary - Ron Waldron

\*Treasurer - Norma Jensen

Centre National Rep. - Rick Huziak  
Newsletter Editor – Kathleen Houston  
Fundraising - Colin Chatfield  
Membership - Mark DeJong  
Activities - Barb Wright  
Observing Coordinator - Larry Scott  
Site Coordinator - Darrell Chatfield  
Councillor - Les Dickson

## Non-Executive

SSSP Chair - Les Dickson  
Library – Darrell Chatfield  
Centre Photographer - George Charpentier  
Meeting Room - Graham Hartridge  
Publications – Jim Gorkoff  
Distant Member Coordinator - Jeff Swick  
Website - Gord Sarty

\*denotes inner executive

## President's Message

Here it is the first newsletter for our new editor Kathleen Houston and already I've missed her deadline. As I type this, Kathleen is on the highway to meet with our outgoing editor Tenho, who, as many of you know, has been a steady hand on the Saskatoon Skies ship for the last 8 years. Best of luck to Kathleen and of course a BIG thank you, Tenho, for all he has done and indeed continue to do for us as he returns to life as gentleman farmer and observer *extraordinaire*.

Thanks also to the volunteers who came out for the open house. What a success, two large convoys and over 300 attendees. This event was both very busy and very fun and it couldn't happen without you. Thanks to the members who could not attend but still were very active on our "street team" printing and distributing posters as well as faxing and emailing invitations.

The skies were so good that night that after the last visitor had departed many of us stayed late to enjoy

the skies. I think I wheeled into my driveway at 04:30 tired but very satisfied.

A real nice mix of folks attended and it was nice to come across curious non-members that already had their own telescopes. I was showing a lady the Veil Nebula and a young person about 11 or 12 years of age proceeded to explain to all around exactly what it was and how it was created, it just knocked my socks off to hear his very accurate depiction and he hadn't even been to the scope for a view yet but when his turn came at my scope he lingered at the eyepiece in amazement....one of our future members.

A short column this month as I now have to get back to Scooby the astro-dog. She has just returned from major surgery, but I know Scooby is anxious to get back out to Sleaford to visit with all of her observing buddies!

# Your New Newsletter Editor!

by Kathleen Houston



I am delighted with my new adventure as editor of the Saskatoon Skies Newsletter. My transition time as editor-in-training involves working with former editor Tenho for November and December issues, and bombarding him with questions as they surface. He made it look so easy and he was relaxed about it!

As the fall 2011 observing season winds down, I am excited about day and night celestial events of 2012. Of special consideration:

1. Last-time-in-our-lifetime transit of Venus on June 5. I recommend going somewhere armed with your scope and solar filters, to see the whole show! Check out the Observer's Handbook for more info.
2. The favourable return of Comet Petriew as a centerpiece for SSSP.

3. And mostly moonless Perseid, Orionid and Geminid meteor showers, to name a few.

I love the night. I connect to nocturnal world by observing the sky and hanging out with the club, and sketching at the eyepiece to experience more about what I am seeing. I have published a few articles for the *Journal*, and will write an article on astro-sketching for the *Observer's Handbook 2012*. I enjoy doing public star nights and hands-on art and astronomy activities that integrate these two great sources of knowledge.

As a nubi-editor I'm eager to promote a variety of experiences for our readers. I want to encourage sketching entries, extraordinary and/or humorous observing hunts, more great photos from your backyard to exotic places or not so exotic places, entries from young astronomers and collect some great themes from our readers. I want to keep an eye on the pulse of the club and invite guest contributors.

Clear skies!

## Thanks to the Sleaford Reconstructions



Bernice at the snack table, in the "New Wing" of the warm up shelter at the Open House.

*Photos by Jeff Swick*

by Norma Jensen

Thank you Rick, Darryl, Bev, Mike C, \_\_\_\_\_ (add your name here) for the work done on the warm-up shelter. The renos to the new section allowed room for the potluck buffet on the day of the Open House. It was so nice to gather into the warm-up as a group: room to sit, eat and visit. Thanks again.



The mega-convoy from Saskatoon arrives, Oct. 22!

# Moon Views

By Norma Jensen



A number of beautiful late fall mornings got me up before dawn and out to view the crescent moon. Again I walked along the terminator. Casting glances at what was revealed with the changing light.

The clear detail in the features along the terminator always surprise me. As you look along its length, there are rings of darkened craters, their rims lit, the rest in darkness. A mountain chain disappears into the dark with only a few peak tops glowing in the light. A mountain stands mid-crater, surrounded by massive rough-layered walls.

It's hard to explain the fascination of a crater complex, the variety of mountain forms, or a rubble

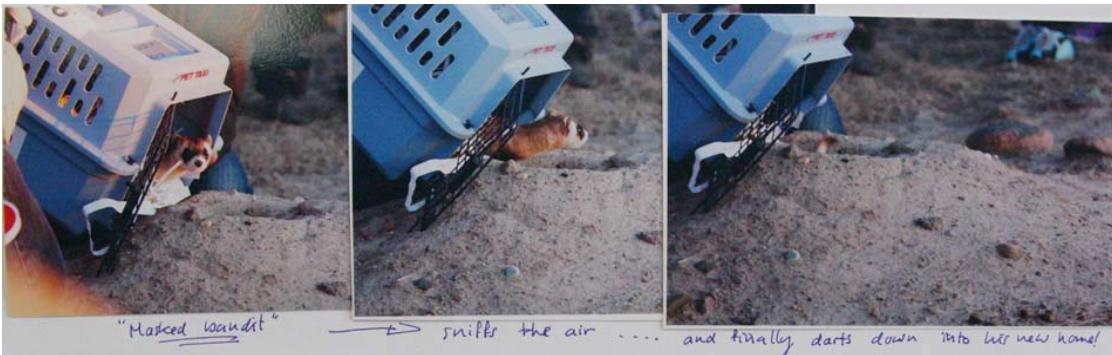
field filled with planes, domes, craters and passageways. Craterlets form lines or concentric circles far outside a crater impact creating an open cluster.

Some memorable locations this trip included Gassendi and Mare Humorum in fine detail, Shickhard with companions and the very interesting pair Hainzel and Mee. Kepler was showing rays to all sides in varying lengths with craters in concentric array. Most surprising was a return to the Sinus Iridium area just after dawn to find J. Herschel and company with the best clarity ever. From Horrebow to Pythagoras and Anaximander, Harpalus to Markov. Amazing!

Session ends with robin song in the saskatoons, and a nuthatch peep in the Larch tree. A new day.

## Ferrets in Freedom: News from the Grasslands Dark-Sky Preserve

by Marael Houston McIntosh and Kathleen Houston



Marael and I were invited to attend the third, and perhaps last ferret release, at Grasslands National Park. The event took place on October 18<sup>th</sup>. This time four high schools were invited to attend, including the Outdoor School from Saskatoon who camped at the Crossing Resort, where Marael and I took a room. All the students attended exhausting hikes during the afternoon and learned in the field from park staff about ecology and geology. We were with a group who were to hike a short walk for the first site to release a ferret from the Toronto Zoo, and about a 2-km walk for the second ferret from the States. Both ferrets are males, bred and raised in SASKATOON SKIES

captivity, attended a survival boot camp in the States, and were released as sites at the edge of prairie dog towns. Ferrets require darkness to survive, and their preferred

meal is prairie dogs. The three other school groups went on more ambitious hikes, for example the Outdoor School went to the snake pit, which involved an hour of hiking in the dark. As we left our second release, deep dusk produced Jupiter, and people painted the prairie wool with their flashlights and graced the land with hushed voices of stories shared, with coyotes singing to remind us whose land this truly is. Here is what 10-year old Marael has to say about her experience:

“She (the park interpreter) was telling us instructions and to the high school students so they can do their

job well. We were walking for the first release to the Ecotour site near the road. They opened the cage and we were waiting for the ferret to come out. Once in a while it would do its noise: a high-pitched chatter. Sometimes people laughed. But when we were quiet,

the ferret looked around. It finally came out and it was smelling the air, turning its head in a half circle. And sometimes it would chatter with its voice. After about five or ten minutes of looking around, he finally disappeared down the hole in front of him."

## RASC National Council Meeting #114

Telecon, Oct. 29, 2011, 8:07 a.m. – 1:22 p.m. CST  
By Richard Huziak, Saskatoon Centre Representative  
<rickhuziak@shaw.ca>

This report is a summary of the meeting, reporting National items that may be of interest to the Saskatoon Centre members. Represented were 35 of a possible 50 attendees from 21 of 29 Centres.

50,000 English-language and 20,000 French-language newly-developed *Moon-Gazer's Guides* will be produced. The intent is to sell these and to distribute these to Centres as *Starfinders* are.

As part of the *Strategic Plan* of the RASC:

- a fundraising manual for Centres and a *Quick Reference Guide to Developing Effective Outreach Programs* has been created and is available in the *Members Resource* section on the National web page (where there are several other useful *guides*)
- membership of the RASC, nationally, has fallen 2% over the last year (despite a *Strategic* goal of increasing membership.)

David Levy has donated his observing logs to the National archives. They will be made available electronically on the National website by the History Committee.

The Observing Committee is considering production an outreach brochure or expanded web resources for the June 5, 2012 transit of Venus and possibly making a bulk purchase of Bader™ viewing filters to aid in Centre outreach programs (though these are available commercially.) It was noted that a partial solar eclipse happens a few weeks before this in Western Canada and another in Oct. 2014. Feedback about interest should be sent to Chris Beckett or Randall Rosenfeld before February.

The *Canadian Not-for-profit Corporations Act (CNCA)* has been passed by Ottawa and Ontario. Centres will have three years (until Oct. 2014) to adapt their constitutions to meet the revised *Act*. Note

that there now appears to be two National variant membership categories – family members and associate members.

The RASC has approved Fundy National Park as the 14th Canadian dark-sky preserve. The park encompasses 20,700 hectares (207 km<sup>2</sup>) of which 80% is preserve and 20% is buffer zone.

A new RASC National web site is being beta-tested. Besides reformatting, a single log-in and your own password gets you access to the entire site. (Yay!) The site will allow instantaneous subscription to discussion groups and have other social media features. The site should be available soon.

The 2012 General Assembly will be held in Edmonton from June 28 through Monday, July 2. Speakers featured will be: Dr. Martin Connors (Athabasca University), Dame Jocelyn Bell Burnell (Oxford University), and Dr. Christopher Herd (U. of Alberta). Registration and the call for papers will open in January.

See: <http://edmontonrasc.com/2012ga/index.html>

The 2013 General Assembly will be hosted by the Thunder Bay on the Canada Day long-weekend, June 28 – July 1. Exact dates are tentative. It will be the Thunder Bay Centre's 25<sup>th</sup> anniversary!

Liability and directors' insurance discussions consumed over an hour of discussion, and a vote was taken to direct National to send an RFQ out to look for less cost insurance for the same or better coverage.

A number of RASC videos have been posted to the RASCANADA YouTube channel. Social media applications for Twitter and Facebook are being developed.

The next National Council (budget) meeting is scheduled for March 10, 2012 at 9:30 EST.



## The Planets This November, 2011

by Murray D. Paulson, RASC Edmonton Centre

In early November **Mercury** shines at magnitude -0.2 and has a lingering conjunction with **Venus**. On the 7th Mercury shines at magnitude -0.2 and displays a 5.91" disc. It is an elongated 21.87 degrees from the Sun and moves out slightly to 22.73 degrees by the date of greatest elongation on the 14th. Mercury will shine at magnitude -0.2 at this time and the disc will have a diameter of 6.7". All during this time, Venus has been shepherding Mercury, about 2 degrees above since back around the end of October. The shallow ecliptic eats this one up, so you will have to check these two out in a daytime scope where the atmosphere will be a bit kinder to them. The nice thing is that Venus is a veritable beacon in the sky and should make the hunt a lot easier. You then can drop down to Mercury and watch its disc grow from a 5" fat gibbous to a 7.3" 50% illuminated phase on November 18th. It will shine at magnitude -0.1 at this time. On the 18th, Mercury will start to slip back from Venus, 3 degrees separation on this date and in a weeks' time it will trail by 9.5 degrees. On December 4th Mercury will be at inferior conjunction as it swings between us and the sun.

**Venus** starts off the month 21.5 degrees from the sun and shines at magnitude -3.9. In the eyepiece you will see a 10.8" gibbous disc. Over the month it gradually expands to 11.7" on December 4th and will now sit 28 degrees from the sun and should be visible low in the southeast in the hour after sunset. Its dance with Mercury is the highpoint of this month, enjoy!

**Mars** has finally broken the 6" size barrier. In a big scope with good seeing, you will start to see interesting things. You will see that the planet is in gibbous phase and will reach maximum gibbous phase around November 24th of 89.9%. Mars rises just after midnight at the beginning of the month, and shines at magnitude 1.0. In the eyepiece you will see its 6.11" 90% illuminated gibbous disc. By the beginning of December, it now rises just before 11:30 pm and shows a 7.4" diameter disc. It has brightened slightly to magnitude 0.6. We are now 3 months from opposition.

**Jupiter** was at opposition at the end of last month and it comes into this month shining at magnitude -2.9 and shows a 49.7" disc in the eyepiece. Over the month of November, Jupiter will retain most of its size and will dim only slightly to magnitude -2.7. The big change will be when it transits

the meridian. In early November, this happens near 11:30 pm, and by the beginning of December, this has moved to 9:30 pm. It is now well placed for observing. There are a lot of interesting Galilean moon events that are listed in your Observer's Handbook. Remember that the time is listed as UT, so we have to subtract 7 hours for time here in Alberta or 6 hours for Saskatchewan. I have included a few nice moon transit events that occur in the early evening: one with Io, another with Ganymede and a last one with Europa, in which you can see the whole parade of events as the moon and its shadow cross the disc of the planet.

Moon	Event		Date	Local time MST
I	Tra	start	Nov 19	19:59
I	Sha	start	Nov 19	20:33
I	Tra	end	Nov 19	22:08
I	Sha	end	Nov 19	22:43
III	Tra	start	Nov 21	20:29
III	Tra	end	Nov 21	22:09
III	Sha	start	Nov 21	22:52
III	Sha	end	Nov 22	00:46
II	Tra	start	Nov 25	19:44
II	Sha	start	Nov 25	21:08
II	Tra	end	Nov 25	22:09
II	Sha	end	Nov 25	23:34

**Uranus** continues to be well placed in the evening sky and shines at magnitude 5.7. It will show you a lovely blue green 3.7" disc in the eyepiece and sits 8 degrees east of the circlet of Pisces. Check out the Handbook for a detailed finder chart. It is one of the curious phenomena of the late summer – early fall sky. The sun sets earlier every day and the constellations and their inhabitants are in lock step with this motion and seem to hang in there forever. So you have another month or so to enjoy Uranus.

**Neptune** shows a 2.4" blue disc and shines at magnitude 7.8 but it is getting rather low in the south-western sky. You have to go for it early in the evening if you wish to catch it in our later fall evenings. At the beginning of the month, Neptune sits at 24 degrees altitude at 7:30 pm and this declines to 18 degrees at the same time of night in early December.

# The Messier, H-400 & H-400-II, FNGC, Binoc & EtU Club

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

Kathleen Houston	Done!	110
Norma Jensen	Up!	109
Ron Waldron		105
Wade Selvig		75
Garry Stone		57
Bernice Friesen	New!	45
Wayne Schlapkohl	Up!	43
Barb Wright		40
Ellen Dickson		34
Jeff Swick		24

## Chatfield BINOCULAR CERTIFICATE

### Certified at 35 to 40 Objects:

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

## 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	Up!	41
Sandy Ferguson		23
Kathleen Houston	Up!	14
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

## Isabel Williamson Lunar

### Observing Certificate

### Certified at 140 Objects:

T. Tuomi

Norma Jensen	Up!	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	Up!

## HERSCHEL 400-II CLUB

Darrell Chatfield	366
Rick Huziak	Up!

The Messier & Finest NGC 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 – check out:

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

On-line Herschel 400 List – check out the official site at:

<http://www.astroligue.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)

Copies of the Isabel Williamson Lunar Observing Program Guide can be purchased at meetings.

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



## Observers Group

by Larry Scott



Well somebody's living right.  
That was two nice Saturdays in  
a row in late October. First, the  
Open House on the 22nd had  
decent skies and an excellent  
turn out by the public. Then,  
the Observers Group on the  
29th was surprisingly good  
after some snow showers earlier that day. The wind  
was a bit of a factor for the six members and guests

attending. Transparency was quite good at times but  
the seeing was only average due to turbulence from a  
steady west wind. We observed Comet Garradd,  
Jupiter at opposition, some meteors, and some nice  
deep sky with the Orion Nebula to close out the  
evening.

Next Observers Group is scheduled for November  
19th with moonless evenings from the 15th to the  
29th.