

# Saskatoon Skies

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

Vol. 41, No. 10

October 2010

## Open House at Sleaford Observatory Saturday, October 16



Saskatoon Centre members have been busy recently doing renovations at the Sleaford Observatory site. Come join us for a night of observing and fellowship at our annual Open House. Bring the family! (See page 3 for details.)

Photo by Jeff Swick



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### 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 / Meeting Announcement / Astronomy Day, Sleaford	3
Minutes of the Executive & General Meetings, September 20	4
Editor's Corner – Christine Kulyk	5
Sky Buys & Mirror Cells	5
The Second Citizen Sky Workshop – Lorin Briand	6
Celestron at Saskatchewan Summer Star Party – Kevin Kawai	7
Making Your GOTO More GOTOer – Jeff Swick	8
The Planets This Month – Murray Paulson	9
The Messier, H-400 & H-400-II, FNGC, Bino, Lunar & EtU Club	10
Observers Group Notes – Larry Scott	10

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: \$77.00 /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 membership coordinator, Mark de Jong, or renew through the National Office and let Mark know that you did!

## 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
- The 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** – Barb Wright, 249-1990  
**Secretary** – Ron Waldron, 382-9428  
**Vice-President** – Jeff Swick, 373-3902  
**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](http://www.ras.sk.ca/lpc/lpc.htm)**

**Newsletter Editors** – Christine Kulyk & Tenho Tuomi

**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 [clkulyk@sasktel.net](mailto:clkulyk@sasktel.net) – preferred as plain unformatted ASCII text files without line breaks. Images sent by e-mail should be 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 20th of the preceding month. Saskatoon Skies accepts Commercial advertising. Please call the editor 306-858-2453 for rates. Members can advertise non-commercial items free of charge.

## RASC CALENDAR OF EVENTS

<b>Oct 16</b>	<b>Sleford Observatory Open House &amp; Potluck BBQ</b>	Jeff Swick	373-3902
<b>Oct 18</b>	<b>RASC Executive Meeting - 6:30 pm, 175 Physics, U of S</b>	Barb Wright	249-1990
<b>Oct 18</b>	<b>RASC Annual General Meeting &amp; Elections -7:30 pm, 175 Physics, U of S</b>	Barb Wright	249-1990
<b>Nov 6</b>	<b>Observers Group – Dusk, Sleford Observatory</b>	Larry Scott	934-5801
<b>Nov 15</b>	<b>RASC Executive Meeting - 6:30 pm, 175 Physics, U of S</b>	Jeff Swick	249-1990
<b>Nov 15</b>	<b>RASC General Meeting -7:30 pm, 175 Physics, U of S</b>	Jeff Swick	249-1990
<b>Dec 4</b>	<b>Observers Group – Dusk, Sleford Observatory</b>	Larry Scott	934-5801

### RASC SASKATOON CENTRE ANNUAL GENERAL MEETING & ELECTIONS



**MONDAY, October 18, 7:30 PM**  
*Room 175, Physics Bldg., U of S*

**“The Fredericton General Assembly  
& Summer Star Parties”  
by Richard Huziak**

Richard Huziak will show pictures from the 2010 RASC General Assembly in Fredericton, New Brunswick, the First Annual Grasslands Dark-Sky Preserve Star Party, and the Spruce Woods (Manitoba) Star Party. He will also show the video produced at the 2009 GA/SSSP at Cypress Hills that promoted Saskatchewan and the SSSP to the world during the 2010 Vancouver Winter Olympics.

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



### Astronomy Day Open House At the Sleford Observatory

**Saturday, October 16**

**Potluck BBQ at 4:00 pm  
Evening Observing Beginning at Dusk**



Everyone is invited to celebrate Astronomy Day at the Sleford Observatory, located about 65 kilometres east of Saskatoon. (For details about Sleford, see our Website.) For those needing a guide to the site, a car convoy will be leaving from the Saskatoon Field House parking lot (east end) at 7:00 pm.

# Minutes of the Executive Meeting, Sept 20, 2010

*by Ron Waldron*

1. Meeting called to order at 6:30 pm.
2. Approval of the minutes of the previous (June) meeting: Moved by Rick Huziak, seconded by Ellen Dickson, and carried.
3. Treasurer's Report (Norma Jensen): Proceeds from the Star Party are currently \$1,789 (not including a few outstanding cheques). One of our "flex" terms with the bank becomes available soon, which will make money available for projects. Please think about how or if we should spend it or "roll it over."
4. SSSP Report (Rick Huziak): Rick has summarized the results in the September newsletter. Despite the rain, 245 people attended.
5. GA Discussion (Barb Wright): Barb had a request from National to pay the overage on the 5% profit from the 2009 General Assembly. They have asked for a submission for approximately \$1,200. A letter will be drafted to respond that since this was a combined event, they are considered Star Party profits, not GA profits.
6. National Council Rep (Rick Huziak): Rick's report on the 2010 GA is being deferred to the October Annual General Meeting. Green laser pointers are being discussed at a national level. The present law reads that in order to point a laser at a navigable air space, you must preregister with Transport Canada. Much discussion followed; no definite direction was decided. This will be brought up at a future meeting.
7. Sleaford Open House: After discussion, it was decided that Saturday, October 16, would be the date (two days after first-quarter Moon). In addition, October 16 is Astronomy Day. Because of mice in the old schoolhouse, a discussion followed regarding safety and liability while using the building for public events. It was decided that we would continue to offer food and warmup in that building.
8. Other Business: Ellen Dickson reported that Joey's Only, in celebration of their 25th Anniversary, has a Community Revival project with funding of up to \$25,000 available to the winning group. She will check into it further by the next meeting.
9. Meeting adjourned at 7:16 pm.

# Minutes of the General Meeting, Sept 20, 2010

*by Ron Waldron*

1. Meeting called to order at 7:30 pm.
2. Remembrance for Bruce Brandell.
3. Approval of the minutes of the previous (June) meeting: Moved by Jeff Swick, seconded by Tenho Tuomi, and carried.
4. Treasurer's Report: See Executive Minutes.
5. Fundraising (Colin Chatfield): Colin is investigating alternate places for our annual Steak Night, as parking at Mulberry's is very limited. There is a place in the Avalon Shopping Centre that is only available on Sundays, but they need at least 100 people. He will continue to investigate.
6. Nominations Committee (Jeff Swick): Nominations for elections in October are almost complete. Vacancies still exist in the areas of Newsletter Co-editor and SSSP Coordinator. Members can still come forward prior to the October meeting to indicate their interest.
7. Events (Patricia Gakis):
  - On Thursday, September 23, at 7:30 pm at Diefenbaker Park, there will be an evening for new members to learn the night sky and look through experienced members' telescopes.
  - On Wednesday, September 29, there will be an evening of Public Observing at Lakewood Civic Centre beginning at 7:00 pm and ending around 9:30 pm.
  - Open House at Sleaford on Astronomy Day, October 16, will include a potluck barbecue beginning at 4:00 pm. Training for members wishing to be certified on Sleaford equipment could occur that afternoon as well.
8. Observer's Group: Next Observer's Group night is October 2.
9. Sleaford Site Coordinator (Darrell Chatfield): Darrell reported on the extensive renovations to the warmup shelter at Sleaford. He showed photos

of the work to date. He emphasized that assistance from other members is not necessary right now due to the confined space in the renovation area.

10. Newsletter (Tenho Tuomi, Christine Kulyk): Deadline for submissions to the October newsletter is Sept. 27.
11. Motion Re. Membership Fees: Christine Kulyk moved that we decrease the Centre portion of the membership fees from \$33 to \$25. This would reduce the total membership cost for Ordinary Members from \$80 to \$72, which is more in line with other Centre fees. Seconded by Colin

Chatfield. Discussion followed. The motion was tabled to the next General Meeting in October.

12. Light Abatement Committee (Rick Huziak): There was a Star Party at Grasslands Dark-Sky Preserve held over the summer. Saskatoon's Dark Sky Policy is being developed and will be on the agenda for a meeting in November.
13. Presentation: Ron Waldron gave a presentation entitled "Star Hopping & Other Tricks to Navigate the Night Sky," geared to our new members.
14. Meeting adjourned at 9:30 pm.

## Editor's Corner

*by Christine Kulyk*

The month of October brings some great opportunities for getting together with our fellow astronomy fans. Our annual Open House at Sleaford, for example, will also serve to celebrate Astronomy Day on October 16 — the fall-season Astronomy Day is a new addition to the yearly roster of regular national and international astronomy events. (Please see page 3 for details.)

October 18 is our Centre's Annual Meeting & Elections night. We encourage all members to attend and to consider running for one of our Centre Council positions. In particular, I'm hoping someone will be able to take over the job of Newsletter Co-Editor that I am currently doing. Our other Co-Editor, Tenho Tuomi, is willing to continue in that role, so whoever becomes his new partner would have expert (and friendly) guidance as needed. I can state wholeheartedly from experience that doing the Centre newsletter is a great job! It gives one the opportunity to keep on top of everything that's going on in our local group and farther afield, while at the same time being creative and getting the chance to sound off about one's favourite topics.

Having had this great experience for the past while, I'd now like to hand it along to someone else and become more involved in some of our Centre's other great undertakings. Attracting (and retaining) new members, for example, is one area that is vital to the ongoing health of our group. The more members we have, the more exciting projects we can undertake (and the quicker we can see them accomplished), the more astronomical friends we may meet, and the more fun we will have in the process.

One prime opportunity to show new folks the fun and fascination of astronomy comes each year on Halloween night. Sidewalk or front-yard astronomy on Halloween night can give kids and their parents a much more exciting (and less toxic) treat than a bag of candy. Every time we do a public observing session, we have the chance to tell people about our club and invite them to join, as well as raising the profile of our group generally. And the beauty part is, it's fun to do!

### SKY BUYS & MIRROR CELLS

#### The Saskatoon Centre's Swap and Sale Page

**FOR SALE:** Discovery 12.5" f/5 PDHQ Split-Tube Dobsonian. Bought in 2007 and used six times. Made some modifications to stiffen the box. Nice views from an excellent mirror, but too much scope for me. Will ship at buyer's expense, or willing to deliver for gas money. Scope currently lists for \$1,699; I would like \$1,000. Contact Norma: [norj@sasktel.net](mailto:norj@sasktel.net)

# The Second Citizen Sky Workshop

by Lorin Briand

Over the Labour Day weekend, it was my privilege to attend the Citizen Sky workshop held in San Francisco, California. I went at the suggestion of Gord Sarty, a Saskatoon Centre member and my thesis supervisor at the University of Saskatchewan.

San Francisco, for those who have never been, is a lovely city with lots to see and do. There is an extensive history, beautiful parks and architecture. It is easy to get around, using public transit as my main method of transportation. I did not have much time to play tourist, as the conference was a busy two and a half days of meetings and workshops.

We were graciously hosted by the California Academy of Sciences, who run a state-of-the-art planetarium and are leaders in science outreach and visualization. The rest of the academy is a very good science centre focused on the biological sciences. There were two free planetarium shows included in the workshop, both excellently done.

The real highlight was, in fact, the meeting! There was an attendance of 57 people from a cross-section of professional and amateur astronomy. After a welcome from Rebecca Turner from the American Association of Variable Star Observers (AAVSO) Citizen Sky team, we got deep into the star of interest: Epsilon Aurigae. It is a fascinating star system.

Epsilon Aurigae is a long-term eclipsing variable star near Capella, easily visible from our latitude. It has a 27-year period and is in eclipse right now. Eclipses last up to 620 days. As of August, we passed mid-eclipse. In the case of this star, it is easy to tell, as the light curve has a substantial bump at its minimum. If you are at all curious about seeing the data, the movie, or any of the ways to get involved, I will be presenting a talk at an upcoming RASC meeting.

New observers are quite welcome, and there is a step-by-step training guide for those willing to do

observations. It is important that the project get good-quality observations on the rise out of eclipse, as there are phenomena of interest in that part of the light curve that require high resolution to detect. English translation: The more eyes looking as often as possible, the better to get lots of important details.

Seeing as the eclipse will be over approximately this time next year, the project is switching its main focus from training observers to training data analysts. The light curve itself is accessible via the internet at the AAVSO Website and the Citizen Sky Website (see URL near the end of this article).

While at the meeting, I took the opportunity to present a poster about my own work with Gord Sarty and Neil Johnson on High-Mass X-ray Binary stars. There were two other posters, one working with archival astronomical data derived from a nonastronomical satellite and one on teaching astronomical techniques for high-school students wishing to do a science fair project. The focus of the meeting was not so much researching as building skills and knowledge in a core group who will widely distribute that knowledge.

A major focus of this conference was also community outreach. Outreach for this project runs from the conventional to the whimsical. More conventional methods include Websites, literature, talks, and cinematic trailers. There is a fascinating explanation using lightbright animation on Citizen Sky's Facebook page — for those of us who like the project page. I highly recommend a visit to the Citizen Sky Website at <http://www.citizensky.org>, or catch me at any RASC Saskatoon Centre event for more information. Personally, I plan to get in on the data analysis as well as a few side projects running around at the same conference.

I want to thank the Citizen Sky team for providing funding for me to come and participate as well as Gord Sarty for suggesting that I go.

# Celestron at Saskatchewan Summer Star Party

by Kevin Kawai

[Ed's Note: Following is a brief excerpt from a blog that appears on the Celestron Website at: <http://www.celestron.com/c3/page.php?PageID=493> ; we encourage everyone to read the full story there and see all the great photos!]

Celestron's Firmware Engineer, Derik DeVecchio, accompanied me on Celestron's first-ever trip to the SSSP. After arriving in Calgary, we took a nice 4.5-hour scenic drive along the Trans-Canada Highway to Maple Creek and then on to Cypress Hills. We arrived on site as light drizzle began to fall, which soon turned to a steady downpour. The roads became muddy, and the grounds saturated with water, yet campers and RVs were still entering the Meadows to claim their campsites. We were immediately greeted and welcomed to the star party by our hosts: Ken From

and Wade Williamson, of All-Star Telescope; Jeff Swick, our initial contact person; Rick Huziak, Registrar & Registration; and Les Dickson, Resort and Speaker Coordinator.

[. . .] We would like to say a big "thank you" to the Royal Astronomical Society of Canada (Saskatoon Centre), Barb Wright, Jeff Swick, Rick Huziak, Les and Ellen Dickson, Alan Dyer, Darrell Chatfield, Kathleen Houston, Chris Beckett, Regina Centre, Ken From and Wade Williamson of All-Star Telescope, and many other dedicated volunteers that put on a wonderful 2010 SSSP and welcomed us (Celestron) to this great annual event. Hopefully, we'll be invited back for a future SSSP, but until then, just remember Derik's famous quotation: "Read the manual."



Life at Buzzard Coulee meteorite hunt HQ was enriched last season with a new outhouse constructed by Saskatoon Centre member Garry Stone, with glow-in-the-dark astro artwork added by Lynne Maillet and Susan Cannon

Photo by Lynne Maillet



In September Jupiter was at opposition and made its closest approach to earth in more than a decade. Garry Stone took the opportunity to use his Konika-Minolta camera to photograph the Great Red Spot on September 18.



And the transit and shadow of Ganymede on September 25, on lower left in the picture.

Photos by Garry Stone

# Making Your GOTO More GOTOer

by Jeff Swick

First, I know there is no such word as “GOTOer,” and second, I can already hear the majority of you groaning about GOTO: “You don’t learn the sky,” you don’t do this or that. To all of you I say: rubbish.

I’ve developed a real passion the last couple of years for multiple and binary stars. The database for such items in my scope is minuscule, so I’ve been star hopping. Not my idea of productivity, but we all observe for different reasons.

The nice thing about binary systems is for the most part, it can be done in the city. The issue I face is similar to most urban astronomers, and that is the old demon alcho. . . er, I mean Light Pollution.

When I observe in the city, I’m forced to look in one direction, and that’s straight over the freeway; which means when I look up, I can’t see many of the stars to begin with. And that’s where my GOTO really proves its worth.

I also have a planetarium program called Starry Night, which when coupled with an add-on Bluetooth device, allows me to run my scope from a laptop. The benefits are several fold. First, no cranking of the neck to star hop. . . enter target, push go, and there you are, smack dab in the middle of the field. The real benefit, however, is not just ease of use. The real benefit is that I also have all my reference books at hand and can stop and read a little more about the object I am currently studying. When I return my eyes to the scope, the object is still there, be it five minutes or a half-hour later. The biggest benefit, however, is that when utilizing Starry Night, I can also use its internal database to learn even more about the item I am researching and observing, be it spectral type, luminosity, distance, or whatever it is I want to know. The program also has another very valuable resource called “info” that lets me instantly access any catalogue or database on the Web to grab even more information.

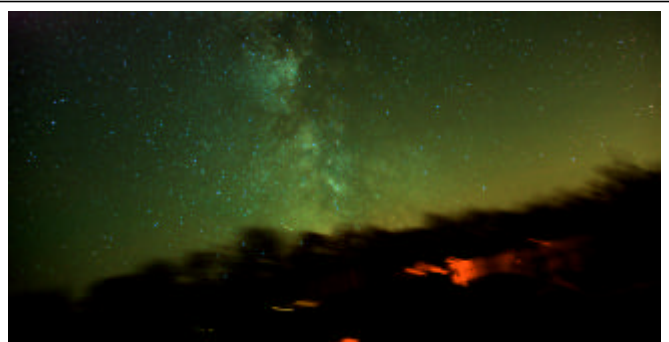
This is a wonderful learning tool, and for my double star program, I don’t mind the light of the computer,

as I’m already facing the freeway lights plus the giant spotlight the city felt it should put two blocks away and the neighbour’s motion light that the cats keep setting off. The educational aspect of having all that information at hand is an enormous benefit, and a few more stray photons can’t hurt my already compromised dark adaptation.

Now, I wouldn’t want Starry Night at a dark-sky site, as my observing priority changes to deep-sky objects such as galaxies and nebulas, where dark adaptation is a key requirement. But for in the city doing stars, it eliminates the tedious star hopping and allows me to just relax, observe, and learn, and, most important, to have FUN.

For those of you with GOTO already, I wholeheartedly recommend this simple add-on to your observing toolbox. For those of you who may be considering a GOTO, I encourage you to do so as well and ignore the naysayers. One thing is for certain, whatever route you go, you will only learn as much as you put the effort into learning.

Observing should be fun, relaxing and rewarding. I’ve been blessed also to be taken under the wing of some of the more experienced observers in our club, and having the benefit of both technology and human camaraderie at the scope has been something that has been truly rewarding.



“Here’s [one] photograph taken on the pier Friday night”, from [rascstoon] Report from Sleaford on Friday’s session, October 2, 2010.

*Photo by Jeff Swick*





# The Planets This Month, October 2010

by Murray D. Paulson, RASC Edmonton Centre

**Mercury** starts off the month in a dive towards the Sun from its September 19 elongation. On October 16, Mercury is in superior conjunction with the Sun, only 36' of arc above the Sun's disc. Mercury will be on the far side of the Sun, and if you could see it, you would find its 4.7" disc shining at a magnitude -1.4. Following the conjunction, Mercury will swing into the evil fall ecliptic and lie lost in the twilight glare. It will take another month and a half to return to the next evening elongation.

The month of October starts off with **Venus** 30 degrees from the Sun. It shines at magnitude -4.5 and will show you a thin 51" crescent in the eyepiece. On October 9, a 2.4-day-old Moon will pass 4.1 degrees below Venus. Venus continues down the ecliptic, and on the 28th of this month, we get a great conjunction with the Sun. On this date, Venus passes 5.7 degrees below the Sun and shines at magnitude 4.0. This is the dress rehearsal before the 2012 transit of Venus across the disc of the Sun. In a telescope, you will be able to see a razor-thin 61.4" crescent. The cusps will wrap around the disc, making the crescent more than 180 degrees around. This is really worth the effort to go out and see in a scope. This will be a Thursday, so take a scope to work and give it a try. Remember, whenever you are looking at something close to the Sun, take great precautions. The Sun can blind you in an instant. The general technique is to use a solar filter to line up the scope on the Sun and get a good focus. Use a low-power eyepiece with about a 1-to-2-degree field of view and no more to do this (too wide a field of view makes accidental exposure to the Sun a possibility). Then move the scope down 5 degrees in declination and lock the declination. If you are using an alt-az scope, at noon 5 degrees of declination is straight down. Now, remove the solar filter and **make sure the scope does not rise when you do it**. Before you put eye to eyepiece, check once again with a piece of paper or the back of your hand to see if **any sunlight is passing through the scope**. If not, then cautiously look into the scope. The good thing about noon is that if you don't have Venus in the field of view, just move left or right a bit and it should show up. What is 5.75 degrees on an alt-az scope? It is exactly 5 centimetres down over a 50-centimetre

length. Hint: you can use a cheap inclinometer to measure the angle on your scope. Venus is moving from east to west about 1.6 degrees per day relative to the Sun, so if you miss a day, you can give it a try on the next date and just shift over 1.6 degrees.

This month, **Mars** continues to be lost in the evening twilight and has effectively disappeared until next spring, when it will return to an unfavourable morning ecliptic.



Jupiter, with its cloud belts and Great Red Spot, makes a magnificent telescopic sight

*Photo by Murray Paulson*

This month, **Jupiter** moves into a better position in the evening sky. At the beginning of the month, Jupiter shines at magnitude -2.8 and will show you a 49.4" disk in the eyepiece. By the beginning of November, Jupiter will shrink to 46" and dim slightly to magnitude -2.7. Jupiter's dynamic atmosphere makes it one of the best shows of the night sky. You can watch to see the remnants of the South Equatorial Belt and see how it evolves, and glimpse the Great Red Spot, which is now more of a light orange colour. You may also glimpse the little red spot that is at a slightly higher latitude than the GRS. There are a few nice white ovals or white lanes in the North Equatorial Belt and a dark spot on the North Temperate Belt, plus a multitude of other delicate features.

This month, **Saturn** is in the glare of the morning sky.

**Uranus** is still as approachable as ever, and better placed for evening viewing. It shines at magnitude 5.7 over the month, and shows a 3.6" blue-green disc in the eyepiece.

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

Join the Club! Observe all 110 Messier, 110 Finest NGC, 400 Herschel I or II, 140 Lunar, 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

Ken Maher	Done!	110
Norma Jensen		108
Ron Waldron		105
Kathleen Houston		90
Margo Millar		77
Wade Selvig		75
Garry Stone		57
Barb Wright		40
Wayne Schlapkohl		36
Ellen Dickson	Up!	34
Jeff Swick		24

### FINEST NGC CLUB

#### Certified at 110 Objects:

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

Larry Scott	Done!	110
Scott Alexander		97
Sandy Ferguson		23
George Charpentier		13
Ken Maher		10
Mike Clancy		7

### Chatfield BINOCULAR CERTIFICATE

#### Certified at 35 to 40 Objects:

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

### Isabel Williamson Lunar Observing Certificate / 140

Tenho Tuomi	Up!	132
Norma Jensen		80
Jeff Swick		20

### EXPLORE the UNIVERSE

#### Certified at 55 to 110 Objects:

M. Clancy, T. Tuomi, K. Maher, B. Gratiias

Wayne Schlapkohl	Done!	55
Sharon Dice		31

### HERSCHEL 400 CLUB

#### Certified at 400 Objects:

D. Jeffrey, R. Huziak, D. Chatfield

Tenho Tuomi	Done!	400
Gordon Sarty		251
Scott Alexander		117
Sandy Ferguson		18

### HERSCHEL 400-II CLUB

Darrell Chatfield		340
Rick Huziak		211



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.astroloague.org/al/obsclubs/herschel/hers400.html>

The Binocular List will be available at each general meeting or can be mailed out on request to distant members.

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



Managed to get out to Sleaford twice, despite the weather. September 7 was clear and calm, with good seeing and very high humidity. We covered our scopes in plastic wrap to protect them and used a blow dryer on our eyepieces to fend off the dew. We got some good views early on, but the sky became very heavy after

midnight. September 11 was the Observers Group and turned out to be a very good night. The humidity was lower, and the mosquitoes went to bed around 22:00. This left the two members in attendance wondering where the other observers were?

Next scheduled Observers Group is November 6, with moonless evenings from October 28 till about November 11.