

# Saskatoon Skies

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

Vol. 41, No. 4

April 2010

## Gearing Up for Astronomy Day



Serving as a suitable lead-in to our April 23-24 celebration of International Astronomy Day (details on page 5), the March 27 Earth Hour event at the Centre Mall proved to be a great success. RASC Saskatoon Centre member Bob Johnson (shown here with his scope at the mall) arranged for the mall's parking lot lights to be shut off at 8:30 pm so we could show everyone the night sky's natural lights without the usual artificial lights to interfere with the view.

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: \$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>Apr 19</b>	<b>RASC General Meeting</b> - 6:00 pm, Mendel Art Gallery	Barb Wright	249-1990
<b>Apr 19</b>	<b>Free Public Lecture, "Studying the X-ray Universe From Space"</b> – 7:00 pm, Mendel Art Gallery	Barb Wright	249-1990
<b>Apr 23-24</b>	<b>International Astronomy Day</b> – See page 5	Barb Wright	249-1990
<b>May 7</b>	<b>Observers Group</b> – 8:30 pm, Sleaford Observatory	Larry Scott	934-5801
<b>May 17</b>	<b>RASC Executive Meeting</b> - 6:30 pm, 175 Physics, U of S	Barb Wright	249-1990
<b>May 17</b>	<b>RASC General Meeting</b> -7:30 pm, 175 Physics, U of S	Barb Wright	249-1990
<b>Jun 12</b>	<b>Observers Group</b> – Dusk, Sleaford Observatory	Larry Scott	934-5801
<b>Jul 1-4</b>	<b>RASC General Assembly</b> – Fredericton, NB	<a href="http://www.rasc.ca/ga2010">http://www.rasc.ca/ga2010</a>	
<b>Jul 9-11</b>	<b>Alberta Star-B-Q</b> – Caroline, Alberta	<a href="http://calgary.rasc.ca">http://calgary.rasc.ca</a>	
<b>Aug 7-15</b>	<b>Mt. Kobau Star Party</b> – Mt. Kobau, BC	<a href="http://www.mksp.ca">http://www.mksp.ca</a>	
<b>Aug 12-15</b>	<b>Sask. Summer Star Party</b> – Cypress Hills park, SK	Barb Wright	249-1990

### RASC SASKATOON CENTRE GENERAL MEETING



*Note Special Location & Time:*  
**At the Mendel Art Gallery**

**MONDAY, APRIL 19, 6:00 PM**

**Followed by**  
**Free Public Lecture at 7:00 PM**

**“Studying the X-ray Universe From Space:  
From the Solar System to Stars & Galaxies”**

**by Professor Kinwah Wu**

(See page 4 for details)

## President’s Message

*by Barb Wright*

Earth Hour on March 27 drew a great crowd at the Centre Mall. Well over 200 people came out to see views of the big, bright Moon and were wowed by Saturn and Mars. Thanks go to all those volunteers who set up their scopes and enthusiastically showed the sky to the public. Thanks especially to Bob Johnson for advertising the event and for arranging to have the mall’s parking lot lights turned off. Advertising was put up throughout the mall, with great results, since many people came specifically because we were there. There were ~10 scopes set up to handle the 200-250 people that wanted a look. The weather cooperated; it was a nice night for families to come out. In fact, even after the parking lot lights came back

on, people were still wanting to have a look. This is a terrific way to observe Earth Hour!

April 23 and 24 will give us another opportunity to show the sky to the public, as we celebrate International Astronomy Day with a two-day program of activities. Please see page 5 for details. We need your participation!

Please see the April meeting announcement above for important information about our next meeting, with its special location and time. Come to the Mendel Art Gallery for a General Meeting at 6:00 pm, with a free public talk to follow at 7:00 pm.



**Free Public Lecture: April 19, 7:00 pm, at the Mendel Art Gallery**  
**“Studying the X-Ray Universe From Space:  
From the Solar System to Stars & Galaxies”**  
**by Professor Kinwah Wu**

X-rays are useful probes for the violent phenomena in the universe, ranging from giant flares ejected from the Sun to relativistic jets launched by supermassive black holes in quasar cores. While we can carry out observations of stars and galaxies in optical/IR wavelengths using big telescopes on high mountaintops, observing the violent universe in X-ray wavelengths on Earth is impossible because X-rays are heavily absorbed by the Earth’s atmosphere. X-ray astronomy is a space-based physical science. It was developed in the late 1960s, when we were able to send instruments above Earth’s atmosphere using rockets.

In this talk, I will show the development of X-ray astronomy from the early rocket experiments to the latest state-of-the-art satellite observatories. I will present some of my research in X-ray astronomy — in particular, concerning black holes and certain exotic objects. I will also discuss briefly some future aspects of space-based astronomy beyond X-ray observations.

Professor Kinwah Wu is an astrophysicist from the University College London’s Mullard Space Science

Laboratory. This lecture and a seminar to be presented the following day (see below) are made possible by funding from the University of Saskatchewan's Role Model Speaker Fund, the Guest Lecturer Fund, and the Department of Physics and Engineering Physics.



NASA artist's impression of the X-ray binary system Circinus X-1, consisting of a Sunlike star and a neutron star

**“Cosmic Magnetism” Seminar April 20 at 11:00 am**  
**With Dr. Kinwah Wu**

On Tuesday, April 20, at 11:00 am, Dr. Wu will give a Physics and Engineering Physics Seminar in Room 103 of the Physics Building entitled “Cosmic Magnetism: A Pedestrian’s Perspective.”

Magnetism plays a very important role in shaping the universe that we live in. We learn about magnetism in schools and universities, yet we have not stopped wondering about the nature and origin of magnetic

fields, be they small beyond subatomic levels or large on cosmic scales.

In this talk, I will discuss the general aspects of cosmic magnetism and present my research on magnetic phenomena in stellar objects and my more recent work on magnetism in extragalactic systems. I will also discuss briefly the implications of structural formation history of the universe on cosmic magnetism.

# International Astronomy Day Activities: April 23-24

by Jeff Swick

Well, Spring again, and the observing time gets shorter but far warmer. As well as the warmer temps, our Centre also joins with other clubs across North America for the annual International Astronomy Day celebration.

The Saskatoon Centre will again be having some sidewalk astronomy at the Lakewood Civic Centre on Friday evening, April 23, from 8:00 pm until a little after 10:00 pm, when the facility closes. This has been a good location for us, as the City allows us to set up right across from the front door so you can drive right up and unload your gear.

The attendance there has always been good, as the facility contains a pool, gymnasium, meeting rooms, and the Cliff Wright Branch of the public library system and also features good visibility for people driving by on the street. If memory serves, we had over 100 guests at that location last year.

Saturday morning, April 24, we are at the Saskatoon Farmer's Market beginning at 8:00 am till roughly 2:00 pm. This location, as many of you know, has become a real destination spot for both city dwellers and visitors alike. We will have our display set up, and also some telescopes for solar viewing. Barb Wright is site captain for that event and will be looking for

volunteers to assist. As a bonus, at that location is all the fresh food from the vendors!

Later that evening, we will be hosting a public Star Party out at Beaver Creek. Kathleen Houston did a wonderful job last year in her presentation in the auditorium, but unfortunately a scheduling conflict will prevent her from doing an encore presentation this year. All is not lost, however, as Ron Waldron has agreed to do the presentation this year. For those of you who have not had occasion to hear Ron speak, I highly recommend him. Not only is he both a knowledgeable and engaging speaker, his warm sense of humour makes him a tremendous asset to our Centre.

Ron's presentation goes at 8:00 pm, followed by public viewing. Last year I think was our best year for attendance, and I remember a nonstop parade of cars and lineups at the scopes for at least a couple of hours.

For those of you who are newer members and have not had a chance to join us under the stars, I highly recommend attending these club events. It's not only a chance to show our friends, coworkers, neighbours, and family members what we do, it's so good to visit with each other under the stars.

More event information will be made available via the Yahoo Group, and I'll be uploading the poster for you all to print and get out to your local community bulletin boards, gas stations, fax machines, etc. Remember that you can also e-mail it to your contacts for them to post as well.

[http://f1.grp.yahooofs.com/v1/AMO0SzA6By-0LohkcwLrNPQ8CpBrrPXaukgYef82iePTigfG\\_MV-XEE1vHCBQ2r8kSIrS\\_EG0mVe8tErqxzzTQ/astronomynight.2010.pdf](http://f1.grp.yahooofs.com/v1/AMO0SzA6By-0LohkcwLrNPQ8CpBrrPXaukgYef82iePTigfG_MV-XEE1vHCBQ2r8kSIrS_EG0mVe8tErqxzzTQ/astronomynight.2010.pdf)

A special thank you goes out to the City of Saskatoon, Meewasin Valley Authority, the Saskatoon Farmer's Market, Andrew and his staff at Beaver Creek, and local media outlets for their assistance and goodwill in making this weekend possible.



Unusual stationary aurora, April 5, 2010, 06:05 UT.  
Photo by Tenho Tuomi

# Minutes of the Executive Meeting, March 15, 2010

*by Ron Waldron*

1. Meeting called to order at 6:37 pm.
2. Approval of the minutes of the previous meeting: Moved by Jeff Swick, seconded by Les Dickson. Approved.
3. National Report: There is a National Council Meeting on March 27, and on the agenda is a possible fee increase. The reason for the increase is to hire an Executive Director, whose duties would include taking away duties of the National Council that are not directly related to running the daily duties of the National organization (i.e., fund-raising, coordination of office staff and duties, promotion of RASC externally, handle charitable requirements, and coordinate and manage volunteers and publishers). Rick Huziak, our National Representative, has requested direction from the Executive on how he should vote on our behalf. The increased fees locally would be \$83 and \$46 respectively. Associate Membership of \$33 is not necessarily affected by the National proposal. Discussion followed. Concerns included the possible shifting from a volunteer-based organization to a business-based organization. One member felt that a paid secretary for correspondence makes more sense than a paid person to “run” the organization. Others felt that we should not be offering more than the volunteers and 1.5 paid employees can provide. It will be brought forward at the General Meeting for a definite decision and direction to give Rick Huziak.
4. Events (Pat Gakis):
  - Bob Johnson at the Centre Mall is really excited about Earth Hour on Saturday, March 27. He will be turning out the parking lot lights from 8:30 to 9:30 pm. Members are encouraged to bring their telescopes for 8:00 pm to set up and participate in this event.
  - The Anglin Lake weekend is scheduled for April 9-10. Coordinators are Norma Jensen and Barb Wright. Contact them if you are interested or planning to attend.
  - Astronomy Day (Jeff Swick): Plans are similar to last year: i.e., Friday night, April 23, at the Lakewood Civic Centre, followed by Saturday, April 24, at the Farmer’s Market (Barb Wright is site captain), and then Saturday evening at Beaver Creek for telescope viewing. Ron Waldron has agreed to give the Star Talk beginning at 8:00 pm.
5. Other Business: Graham Hartridge suggested making a how-to video on the Sleaford facility, to be posted on the Yahoo group. Graham will work with Rick Huziak to try and make this happen. There was some discussion around why our 16” telescope was being underused by our members. Some felt that members may be a little intimidated by the mechanics of the roll-off shelter where it is presently housed.
6. Motion to adjourn: Ellen Dickson. Adjournment at 7:22 pm.

# Minutes of the General Meeting, March 15, 2010

*by Ron Waldron*

1. Meeting called to order at 7:38 pm.
2. Approval of the minutes of the previous meeting: Moved by Mike Clancy, seconded by Ellen Dickson. Approved.
3. Book Sales: Barb Wright requested someone to look after the ordering and sales of our books at meetings, star parties, and some public events. This person would manage the inventory and look after the money as well. Jim Gorkoff volunteered to look after this and may approach other members for help.
4. Proposed National Executive Director: (See Executive Minutes.) More discussion among the membership ensued. The general consensus was similar to what surfaced at the Executive Meeting. The result of this discussion was to recommend to Rick that we do not support the hiring of an Executive Director but we do not oppose in
- Jim Gorkoff made a motion, seconded by Ellen Dickson, that our old calendars be taken to public events and be given away as they are of no value anymore. Motion carried.

principle a fee increase for other reasons not tied to this position.

5. Events: See Executive Minutes.
6. Membership: Mark de Jong reported that there is no significant change in membership numbers: i.e., it remains fairly constant at 74.
7. Newsletter: Christine Kulyk notified members that the next newsletter deadline is Monday, March 29, for publication in the April newsletter. She also added that local artist Glen Scrimshaw is self-billed as "Maestro of Majestic Skies" and that he has expressed interest in coming to SSSP at Cypress Hills one of these years. We will be

approaching him to possibly give a talk at a future meeting.

8. SSSP Committee: Les Dickson reported that the committee is still searching for speakers for this year's Star Party at Cypress Hills. They will be contacting CASCA for possible sponsorship of a Thursday night speaker. The change of dates for this year's event has created a shortage of accommodation: i.e., there will not be as many places reserved for us as we normally have had. The new dates for SSSP are August 12-15, 2010.
9. Presentation: Mike Clancy on "Inconstant Moon."
10. Meeting adjourned at 9:45 pm.

## Editor's Corner

by *Christine Kulyk*

The 2010 edition of International Astronomy Day, coming up on April 24, offers us another excellent opportunity to strut our astro-stuff. Our Centre celebrates with two days of planned activities on April 23-24 (see details on page 5 of this issue).

If you live in the Saskatoon area, we hope you'll come and join us at these special events. Bring a telescope or binoculars to the public observing sessions and help show everyone the night sky. If you live farther afield, celebrate the day by doing some sidewalk astronomy in your own community, or just by getting out to your own favourite observing site with friends or family. Please send us some pictures afterwards.



First good aurora in this sunspot cycle, on Monday night, April 5 between 9:30 and 10:30 pm.

Photo by Colin Chatfield

Finally, I'd like to extend a hearty welcome to our newest member, John Patterson of Saskatoon. Also a special welcome to new Temporary Members who came aboard at our Earth Hour event on March 27. We hope you'll enjoy reading *Saskatoon Skies*, and we look forward to seeing you at many future events!

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# Earth Hour at the Mall

by Colin Chatfield



Picture by Jeff Swick

March 27 saw the arrival of Earth Hour across the planet. This year saw the largest participation level globally since it started in 2007. Locally, it was the second year that the RASC Saskatoon Centre has taken part in the event at The Centre Mall.

Earth Hour was held from 8:30 to 9:30 pm on Saturday, March 27. The day itself started out very cloudy and was not looking like it was going to clear up. However, at around 8:00 pm, it started to show signs of cooperation, and come 8:30, it was mostly good viewing once the lights went out. Many telescopes were fixed on Saturn, with some on Mars and the Moon.

Many RASC members arrived early to start setting up their telescopes, which ranged from my 4.5" Orion reflector to 8" SCT and Dobsonians and larger. There was a good mix altogether and about a dozen telescopes in total.

A vast amount of people stopped by to look through the scopes. Many didn't know why we were set up there in the first place, so we got to explain it. Most people had forgotten about Earth Hour or had heard about it and decided to go to a movie, etc. The location was ideal, as many people were coming and going to leave from or get to their movie, and so the turnout was great. All told, there were over 300 people who stopped by to view and chat and be amazed. Many new RASC members were signed up as well, thanks to Barb and Ellen.

All in all, it was a great night of fun and sharing of our love of the hobby. The comments from people

were all positive, such as, "Wow! That's so awesome!" Many were astounded to see Saturn's rings and its moons, as well as Mars, and the "dimples" on the Moon; and many couldn't believe they were actually seeing those objects. One guy was even on his cell phone saying, "I'm looking at Saturn right now!" Both kids and adults alike appreciated what we showed them.

A great job by all involved. Big thanks to Bob Johnson for all of his work and to Jeff Swick too. I know I'm already looking forward to next year.

## SKY BUYS & MIRROR CELLS

*The Saskatoon Centre's Swap and Sale Page*

**5" Astroscan telescope.** Red exterior. Good condition.

**8" Celestar Deluxe S/C telescope.** Includes many extras and upgraded items, such as finder, W/O diagonal, Feathertouch focuser, Telrad, Bob's Knobs, Dry Eye dew heater system, padded main scope case, and tripod bag. This scope has great optics, as attested to by a former Celestron employee at a previous SSSP. This scope has seen me through 3 certificates, and will track for hours on end. If you want a great scope, then please consider this one. Over \$3,300 invested. Asking \$1,700. Will consider offers. Please contact Darrell (306-374-9278; [novachat@sasktel.net](mailto:novachat@sasktel.net)).





# The Planets This Month, April 2010

by Murray D. Paulson, RASC Edmonton Centre



**Mercury** starts off this month, on April 8, at greatest eastern elongation. Look southwest after sunset with binoculars. The ecliptic is very steep, making this one of the better apparitions of the season. Mercury sets two hours after the Sun. At this time, it shines at magnitude 0.0 and shows a 7.7" fat crescent, sitting 19.35 degrees from the Sun. It is approaching Earth and will expand over the following week to 9.4", but will fade to magnitude 1.5. It rapidly disappears as it swoops in to the April 28 inferior conjunction. At that time, it will pass just 42' from the Sun's edge.

This month, **Venus** shines at magnitude -3.9 and flirts with Mercury in evening twilight for the first two weeks of the month. In the eyepiece, you can see its fat 10.7" gibbous disk at an elongation of 21 degrees from the Sun. Over the month, it will continue its slow climb up the ecliptic; and by the end of the month, it will increase in size slightly to 11.3", but it remains at magnitude -3.9. By month's end, Venus will have moved to 26.6 degrees elongation from the Sun.

**Mars** looked good last month, and I managed to talk many folks into noticing the polar cap and some of the dark features on the planet's face. At the beginning of April, Mars presents a 8.7" gibbous disk and shines at magnitude 0.3. It has gotten much smaller, and now only major features are glimpsed. You need very high powers to make much out of it. The one thing I notice is that even though it gets small, it is still bright and has good contrast between major features and the disk. Mars continues to shrink over the month; and by the month's end, it shows a 7.3" 90 percent-illuminated disk in the eyepiece. It now shines at magnitude 0.7.

**Jupiter** is in the morning twilight glare, and due to the shallowness of the ecliptic on a spring morning, it remains in the twilight glare over the month. By the month's end, Jupiter sits only 9.5 degrees above the horizon at sunrise. It will be at the summer star parties that we will finally get a good glimpse at Jupiter.

**Saturn** looked like a ball on a stick at public observing nights last month, and everybody loved it. The month starts off with the rings tipped up at only 2.5 degrees, and Saturn shines at magnitude 0.6. In the telescope, you will see a 19.4" disk and an array of small moons. The moons' orbital planes are very shallow like the rings, so you will see them in line with the rings. The shallow angle of the rings will reduce their glare and make hunting the elusive inner moons much easier. By month's end, Saturn will fade slightly to magnitude 0.8, and the planet's disk will reduce to 19.0". The rings' tilt will become shallower at 1.9 degrees, and even shallower in late May.



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## 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		32
Jeff Swick		24
Bruce Brandell		5

### 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

Norma Jensen		74
Tenho Tuomi	Up!	66
Jeff Swick		16

### 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		323
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 Notes

by Larry Scott



Had a sparsely attended Observers Group on March 6, with only Ron and myself. Conditions were good overall with excellent seeing. Maybe a bit more dew than we would like. We had a look at Mars, Saturn, M3,

M67, etc. A good night, with some nice bands of aurora showing up later in the evening as well.

The next weekend on March 12, we tried again. Ron and I were out, as well as our new friend Gord. (Hope I've got that right.) The sky did not cooperate as we started the evening, with average conditions which got progressively worse. The Messier Marathon scheduled for the next night was clouded out, as were most of the nights which followed. See page 3 of this issue for Observers Group nights scheduled for May and June.