

Saskatoon Skies

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

Vol. 40, No. 2

February 2009

Solar Splendour on a Snowy Landscape



Bob Johnson caught this fine image of a double halo around the Sun on December 17: "I was in my car pulled to the side of the road, and as I was taking pics of the halo and upper tangent arc, a secondary 46-degree formed; then before my eyes, the circumzenithal arc, only lasting a few minutes." (Taken with a Canon 40D and Tokina 10-17mm fisheye lens.)

Photo by Bob Johnson



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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

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.

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 – Al Hartridge, 373-0034
Vice-President – Jeff Swick, 373-3902
Treasurer – Norma Jensen, 244-7360

Bottle Drive & Canadian Tire \$

By Darrell Chatfield

If you cannot make it to a meeting but would like to contribute your Canadian Tire money please call me at 374-9278.

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 – 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 stated), but source credit is requested. DEADLINE for submissions is the 26th of each month. Saskatoon Skies accepts Commercial advertising. Please call the editor 306-858-2453 for rates. Members can advertise non-commercial items free of charge.

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

RASC CALENDAR OF EVENTS

| | | | |
|----------------|---|-------------|----------|
| Feb 9 | RASC Executive Meeting – 6:30 pm, 175 Physics, U of S | Barb Wright | 249-1990 |
| Feb 9 | RASC General Meeting – 7:30 pm, 175 Physics, U of S | Barb Wright | 249-1990 |
| Feb 20 | Observers Group – 7:00 pm, Sleaford Observatory | Larry Scott | 934-5801 |
| Mar 14 | Observers Group – 7:00 pm, Sleaford Observatory | Larry Scott | 934-5801 |
| Mar 16 | RASC Executive Meeting – 6:30 pm, 175 Physics, U of S | Barb Wright | 249-1990 |
| Mar 16 | RASC General Meeting – 7:30 pm, 175 Physics, U of S | Barb Wright | 249-1990 |
| Mar 21 | Messier Marathon – 7:00 pm, Sleaford Observatory | Larry Scott | 934-5801 |
| Apr 2-5 | 100 Hours of Astronomy – Fairhaven, Lakewood, Beaver Creek | Jeff Swick | 373-3902 |
| Apr 17 | Observers Group – 8:00 pm, Sleaford Observatory | Larry Scott | 934-5801 |

Minutes of the Executive Meeting January 19, 2008 by Al Hartridge

1. Meeting called to order at 6:30 pm.
2. Approval of minutes of the previous meeting: Moved by Jim Young, seconded by Les Dickson, and carried.
3. Financial Report: Norma stated that the net income for 2007-08 was \$6,519.92. Over \$2,200.00 was raised for the Bill Hydomako memorial fund.
4. National Council Rep: Les Dickson went over the fee-collection agreement with National Office and also talked about family memberships (which may be issued by individual Centres, National having no involvement in this).
5. IYA Activities: Jeff Swick and Barb Wright talked about some of the ideas developed at the last IYA meeting at her place.
6. Newsletter: A motion was made by Christine Kulyk to mail a copy of the newsletter to four neighbouring RASC Centres (Edmonton, Calgary, Winnipeg, and Regina), plus three independent astronomy clubs in Alberta, until after the upcoming GA. Seconded by Norma Jensen and carried.
7. Meeting Adjourned at 7:25 pm.

Minutes of the General Meeting January 19, 2008 by Al Hartridge

1. Meeting called to order at 7:30 pm.
2. Approval of minutes of the previous meeting: Moved by Tenho Tuomi, seconded by Rick Huziak, and carried.

3. Financial Report (Norma Jensen): See elsewhere in this issue. A motion was made by Gord Sarty that the financial report be accepted. Seconded by Chris Martin and carried.
4. Observers Group: Last observing session was wiped by poor weather.
5. National Council Rep (Les Dickson): Family memberships (see Executive Minutes). The fee will be established as the Centre fee rate minus the cost of the newsletter.
6. Membership (Mark de Jong): There are 77 regular members, 2 associate members, and 1 temporary member at present.
7. Light-Pollution Abatement: Rick Huziak stated there are two new casinos with lights.
8. Newsletter: The deadline for newsletter items will be this coming Thursday (Jan. 22).
9. Astronomy Art Display (Kathleen Houston): The exhibition will be at the downtown library for the month of September 2009.
10. IYA Activities: A list of approximately 12 to 13 activities that our club might attend was drawn up at the last IYA meeting at Barb Wright's. Permission to reprint the article on SSSP from *SkyNews* has been given. A star party podcast is being considered. There are handouts from National that are available for distribution at IYA events. Space in the Farmer's Market has been booked for Astronomy Day this year. Ron Waldron would like volunteers to help him with a school star night he has planned for April 2.
11. Presentation: Sleaford Committee: "Sleaford Observatory Development Project - Visions and Plans for 2009." Presented by Rick Huziak with discussion from the floor.
12. Meeting adjourned at 10:00 pm.



MONDAY, FEBRUARY 9, 7:30 PM
Room 175, Physics Bldg., U of S



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

International Year of Astronomy: What's Ahead for 2009 & How to Celebrate Saskatchewan-Style!



BOOKS FOR SALE

by Bruce Brandell, Sales Coordinator



The following featured books will be available for purchase at the February 9 meeting:

SEEING IN THE DARK by Timothy Ferris 2003 ----- \$18.00

An in-depth exploration of many of the major areas of observation in astronomy, with descriptions of large telescopes and observatories around the world. Leads amateur astronomers into the irresistible challenges of personal observations of the Moon, planets, asteroids, our Milky Way, and other galaxies.

PATRICK MOORE ON THE MOON 2006 ----- \$27.00

PATRICK MOORE ON MARS ----- \$23.00

Packed with good illustrations and detailed descriptions of surface features by one of the world's acclaimed experts, these are excellent guides to studies of the Moon and Mars.

National RASC Writing Contest

The Royal Astronomical Society of Canada is sponsoring a competitive writing contest, Canada and the Stars, so that you can tell the story of Canada's record of achievement in astronomy and space science to other Canadians and the world. Winners will receive cash prizes of up to \$500 and the opportunity for publication.

Any subject with significant Canadian astronomical involvement, from the past to the present, is suitable for entry. Your article can be

on a research project, a discovery, a theory, a technique, an instrument, an observatory, amateur or professional astronomers, or an expression of astronomy in the wider culture, such as in art, thought, social structures and interactions, or any combination of these.

Submissions will be accepted from December 1, 2008, to August 1, 2009. For complete contest rules, see:

<http://www.rasc.ca/education/iya/csc.shtml>

President's Message

by Barb Wright

Now that the coldest weather is (hopefully) behind us, we can get out and really get going with International Year of Astronomy plans and events. It was disappointing to have to cancel the Christmas potluck night, but we will have a social event this spring instead (when it is unlikely to be minus 40).

Come join your fellow Centre members for 100 Hours of Astronomy in April (April 2-5), and of course the General Assembly in August (August 13-16). We encourage everyone to be a part of the many things that will be going on this year!

Saskatoon Centre's biggest contribution to the International Year of Astronomy is hosting the RASC's national General Assembly. Check out the Centre website (<http://homepage.usask.ca/~ges125/rasc/sssp2009.html>) to see the outline of our plans; it's looking very exciting.



Now it's time for members to think about their participation in the GA. Your help will be needed for transportation to and from Cypress Hills. Do you have a truck or trailer to bring some supplies? Or if not a trailer, then at least open up a seat for

a passenger. Talk to the planning committee; let us know what day you are arriving and returning, and how you are going to contribute to the GA's success.

We have reserved the entire hotel, condo, and cabin complex – and it is FULL. If you have made a reservation and have a spare bed in your suite, we strongly urge you to consider sharing with another GA attendee. Let us know as soon as possible so we can accommodate those trying to find a place to stay. E-mail sssp.sk@sasktel.net or phone Barb Wright (249-1990), Rick Huziak (665-3392), or Kathleen Houston (665-3392).

Editor's Corner

by Christine Kulyk

If you read this issue cover-to-cover (as I'm sure you always do), you're going to discover many exciting details about events and projects our Centre is planning or taking part in during the 2009 International Year of Astronomy (IYA). To learn even more, be sure to attend the February 9 meeting, where we'll be talking about how everyone can get into the act.

I hereby invite all our readers to send me YOUR plans and ideas for celebrating IYA. (I'm particularly interested in hearing from those who live outside Saskatoon and can't often make it to a Centre meeting.) Do you have a personal observing project you're going to undertake this year? Or perhaps you're planning to do some sidewalk astronomy in your community? Or take your scope to a local school, park, or community event? E-mail me at clkulyk@sasktel.net, and I'll compile a roundup of ideas and plans in one or more future issues of *Saskatoon Skies*.

If you have a special event planned and would like to register it as an IYA event, contact Jeff Swick (jswick@shaw.ca). The RASC National Office has sent us boxes of handout materials for IYA: colourful astronomy trading cards, handy cardboard planispheres, and a booklet on how to "Become a Sidewalk Astronomer." Get in touch with Jeff if you would like to obtain some of these to hand out at your event.

Finally, I encourage everyone to use *Saskatoon Skies* as a handy item for promoting astronomy during IYA. Print out an extra copy from our Web page (<http://homepage.usask.ca/~ges125/rasc/newsletters.html>), or pass along your own copy (after you've finished reading it of course) to a friend, relative, or coworker, donate it to a school or library, or post it on a community bulletin board. Then e-mail me to tell me about your networking efforts!

The Sky Is Full of Comets

by Tenho Tuomi

Not just one, but *several*, comets are currently visible in our sky.



Comet Lulin taken January 26 with a Canon Rebel through an 8-inch reflector.

Photo by Tenho Tuomi

Earth. My first picture of it was through the living-room window, when the temperature was –30°C. This is the comet to keep an eye on.

In the evening there are several comets. Comet 144P/Kushida is a nice magnitude 8 comet in Taurus. It is close to Earth (only 0.7 AU), but twice that distance from the Sun, so that its tail must be behind it (as with Comet Holmes). It was at perihelion in January, so will start fading gradually in February.

C/2006 W3 (Christensen) is more of a challenge object, low in the west in Lacerta. It is magnitude 10, but expected to brighten to magnitude 8 by July. It is about 3.8 AU from earth, close to Jupiter's orbit.

C/2006 OF2 (Broughton) is also about magnitude 10 but nicely high in the sky in Auriga. It will be slowly fading after this.

As my challenge object I went looking on January 26 for comet C/2008 T2 (Cardinal), which was found by Rob Cardinal in Calgary in October last year. I found it in Cassiopeia but at magnitude 12, it probably is the faintest comet I have observed. I took a picture of it to be sure. It will brighten until it disappears to the southern

hemisphere in May. Both it and Broughton are about 2 AU from Earth.

C/2008 A1 (McNaught) is still low in the evening sky but fading fast. I observed it last November.

I took pictures of all of these comets and uploaded them temporarily to

<http://www.lex.sk.ca/astro/350d/comets09.jpg>.

It is surprising how well the telescope, mount, camera, and timer work at –27°C, even with a stiff breeze. Fingers don't work as well.

The year 2009 is starting out well. In the first month, I have found as many comets as I observed all of last year.

All-Star Telescope
www.All-StarTelescope.com

Guide Scope
Equinox 80
(Reviewed by Alan Dyer,
SkyNews, Sept/Oct 08)

Orion GuideScope
Rings

Orion StarShoot

AutoGuider
(Reviewed by Alan Dyer,
Sky & Telescope,
November 2008)

Sky-Watcher
EQ6 PRO GPS

Equinox 120
(Reviewed by Terence
Dickinson, SkyNews, July/
August 2008)

Astro Photography Source
T-Rings, Photo Adapters, Radial
guiders, piggyback mounts, Los-
mandy dovetail plates for SCT and
more

Horsehead IC434 by Dalton Wilson
with Equinox 80, EQ6 PRO
Orion Autoguider

Equinox 120 HEQ6 GPS
Package - \$2999.95
(pictured above)

TeleVue
Ethos 17mm
Free Shipping

All-Star Bino Mount
with tripod - \$329.95
Special - \$299.95 with
purchase of 25 x 100 or
20 x 80 binoculars

1-866-310-8844
Didsbury, Alberta

Events Coordinator's Report

by Jeff Swick

Well, it can't possibly get any colder than it is as of this writing...even the North Pole is warmer than it is here today. We have some events planned, however, that can't help but warm you up.

March means Messier Marathon (which Larry has scheduled for March 21). Our other annual springtime event is Astronomy Day, or in this case, 100 Hours of Astronomy (April 2-5) as part of the IYA festivities. This year, we have added an extra event. We will start the 100 Hours off with the folks at Fairhaven School on April 2, beginning at 7:30 pm. (Ron will provide more details as they are firmed up.)

The next evening, April 3, we will be at Lakewood Civic Centre (TBC) at 7:30 pm, running until shortly after 10:00 pm. This has proven to be a fun activity in the past, as we are outside the front doors of the facility and have a good turnout of passersby.

Saturday, April 4, finds us at the Saskatoon Farmer's Market. This will be our third appearance there, and our second at their new location. A great opportunity to show off our nearest star, the Sun, as well as astronomy in general. It's encouraging how many people were interested in light-pollution abatement.

Ellen will provide details closer to the event on the Gastronomy that follows. If you have suggestions for locations, please contact her (dicksonl@sasktel.net).

The evening of April 4 again finds us at Beaver Creek for public viewing.

We also have the opportunity to provide a short talk and slideshow in their auditorium. If you are interested in doing this presentation, please contact me (jiswick@shaw.ca) as soon as possible.

Andrew has also asked me if the club would be interested in hosting a Star Night in August. Being that we may be short-staffed due to SSSP, I said I would get back to him after speaking to y'all about it. Perhaps if we can't do it in August, a nice early-September evening would be in order. Give it some thought, and we can speak about it at the general meeting in February.

Aside from those events, the Executive met to plan out other activities for IYA, and we will fill you in at the February meeting. That by no means is to imply that there is no room for other events...in fact, quite the opposite. If you have any ideas or are involved in any events that you think would be a good fit for IYA, simply let us know and we'll see if we can accommodate.

Just a reminder that since I have become your new Vice President, there is an opening in the Events Coordinator position. If you are interested, just shoot me an e-mail or phone (373-3902), and I will be happy to explain what all it entails.



Even a simple setup can capture an astronomical highlight such as this lovely conjunction of the crescent Moon, Jupiter, and Venus taken on December 1 at 6:08 pm using a Kodak digital camera with 10x zoom on auto setting.

Photo by Norma Jensen

Right now, it entails finishing this article and then booking a trip to Cuba to tan my pasty white behind on the beach...bah to all this cold weather. Before I forget, I want to thank Larry and Norma for their efforts shovelling snow at Sleaford...it shouldn't be a thankless task.

Saskatoon Centre Financial Statement for 2008

Operating Statement for the Fiscal Year Ended September 30, 2008

| Revenue | 2007-08 | 2006-07 |
|----------------------|----------|----------|
| Membership Fees | 2015.19 | 2337.18 |
| Public Education | | 40.00 |
| Retail Sales | 1761.42 | 1918.50 |
| Donations | | 847.58 |
| Star Party | 15203.96 | 14042.90 |
| Dinners, Raffles | 780.56 | 3281.83 |
| Advertising | 115.00 | 176.00 |
| Interest | 482.73 | 385.60 |
| Total Revenue | 20358.86 | 23029.59 |
| Expenses | | |
| Public Education | 267.93 | 133.32 |
| Taxes and Licenses | 10.00 | 10.00 |
| Star Party | 9016.93 | 11666.32 |
| Utilities | | 502.80 |
| Insurance | 1099.96 | 1002.00 |
| Repairs, Maintenance | 31.99 | 265.85 |
| Office, Newsletter | 827.37 | 1012.86 |
| Retail Sales | 991.99 | 783.50 |
| Depreciation | 850.40 | 837.17 |
| Miscellaneous | 657.56 | 206.16 |

by Norma Jensen, Treasurer

| | |
|------------------------------|----------------|
| Fund-Raising | 84.81 |
| Total Expense | 13838.94 |
| Net Surplus (Deficit) | 6519.92 |

Statement of Assets and Liabilities September 30, 2008

| Assets | 2007-08 | 2006-07 |
|--|-----------------|-----------------|
| Cash | 12179.08 | 6150.14 |
| Term deposits | 19771.91 | 19399.51 |
| Raffle Fund | 313.62 | 312.83 |
| Buildings, Equipment | 16157.66 | 15906.06 |
| Retail Inventory | <u>2214.00</u> | <u>2081.25</u> |
| Total Assets | 50636.27 | 43849.79 |
| Liabilities | | |
| GA Donation | 266.56 | |
| Surplus (Deficit) | | |
| Balance Forward | 43849.79 | |
| Current Year Surplus | 6519.92 | |
| Balance End of Year | 50369.71 | |
| Total Liabilities and Surplus | 50636.27 | 43849.79 |

Observer's Group Notes

by Larry Scott



For a change of pace, we showed up for an Observers Group meeting on a night when we should have stayed home, instead of staying home on a night we should have gone out.

The road to Sleaford on January 17 was icy, but the forecast was for clear skies. I packed my van and carefully made my way out to meet Norma and Ron for an evening of stargazing. Upon arrival, we found the yard had recently been ploughed and was in good shape except for a bit of drifting. We pulled out the shovels and snowblower (thanks again, Mike) and cleared the

driveway, walkways, and a spot to observe on the knoll. We were treated to a spectacular winter sunset while working.

Once the snow was cleared, we set up our scopes just in time for the clouds to roll in around 21:00. We did get a look at Norma's new scope and did a little of the tweaking that all new scopes require. Ron did find a couple of objects, but that was the extent of the observing.

Next Observers Group is scheduled for Friday, February 20, at 19:00. Sunset is at 18:27. If that doesn't work out, there will be Moonless skies from February 12 to 28 to try our luck. See you at Sleaford.



The Planets This Month, February 2009

by Murray D. Paulson, RASC Edmonton Centre

Mercury has zipped up from inferior conjunction with the Sun on January 20, and in a few short weeks will be at its greatest western elongation on February 13. A Valentine's conjunction with a hot body! Mercury will be 26 degrees from the Sun at the time and will display a magnitude 0, 60 percent-illuminated, 6.9" disk. This is a morning event, and not particularly favourable. Mercury rises at 6:50 am, followed by the Sun 1 hour later. At sunrise, Mercury is only 6.6 degrees above the horizon. This one is better pursued in the daytime. Note, if you want to see Mercury 50 percent illuminated, take a look on February 8.

Venus is the darling of the evening sky. Even people who are not skywatchers are taking notice of it in the crisp winter evenings. If you have a good dark-sky location, you may even note a shadow cast by Venus. Tenho Tuomi caught a photo of such a shadow last year. In it, you can see the shadow of his telescope projected on a building. It has been nearly a month since Venus passed greatest eastern elongation, and it has started to expand. By early February, it will shine at magnitude -4.5 and will show a 33", 36 percent-illuminated crescent. It's going to start a more rapid descent towards the Sun, quite different from its leisurely pace outward over the last 8 months. You will see a difference weekly from this point onward. By early March, it still shines at magnitude -4.5, but will show a 12 percent-illuminated, 51" crescent in the eyepiece. Next month, conjunction! If you've never watched Venus before, this is the time.

Mars is in the morning sky, but shines at magnitude 3.6 and is only 18 degrees from the Sun. There is little chance to find it in the Sun's glare, so you will have to wait another month or two for a glimpse of the red planet.

Jupiter was in conjunction with the Sun in late January, so it will be lost to the Sun's glare for the next month. It will pass Mars on February 17 and Mercury on February 23, but both events will be visible only in bright twilight, or in a daytime sky.

We are one month off the opposition of **Saturn**, and it is wonderful to see the ringed planet with such a shallow tilt! With this tilt comes the opportunity to see satellite events: transits, shadow transits, and eclipses of satellites by Saturn. Titan transits are much like Ganymede transits, where the satellite is much darker than the surface of the planet. We have only a few of these events before the alignment of Earth and Saturn no longer allows Titan transits. The shadow transits will continue undeterred, but the next Titan transits will happen in July, when Saturn is in the summer twilight and close to the Sun. Note: You will need lots of magnification to see the transits and shadow transits. Try magnifications in the 300 to 600-power range to view the diminutive 0.87" disk of Titan in relief against the disk of Saturn.

We start off the month with Saturn shining at magnitude 0.6 and showing a 19.5" disk in the eyepiece. On March 8, we are at opposition, with Saturn shining at magnitude 0.4 and showing a 19.8" disk in the eyepiece. As I mentioned last month, this is a great time to look for the inner moons if you haven't crossed them off on your observing challenge list. Consult Guide, The Sky or your favorite software to predict when the elongations will be favourable.

The outer two gas giant planets are in close proximity to the Sun, so they are lost till next summer. **Neptune** is in conjunction with the Sun on February 12, and exactly 4 weeks later, on March 12, **Uranus** follows in conjunction as well.

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, 135 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. Hydomako, T. Tuomi, L. Scott, G. Charpentier, B. Johnson, M. Clancy, L. Dickson, B. Burlingham

| | |
|-------------------|-----|
| Ken Maher | 109 |
| Norma Jensen | 108 |
| Ron Waldron | 105 |
| Brent Gratias | 96 |
| Mike Oosterlaken | 93 |
| Kathleen Houston | 85 |
| Margo Miller | 77 |
| Wade Selvig | 75 |
| Garry Stone | 57 |
| Ellen Dickson | 32 |
| Jeff Swick | 24 |
| Barb Wright | 23 |
| Bruce Brandell | 5 |
| Katelyn Metanczuk | 4 |

FINEST NGC CLUB

Certified at 110 Objects:

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

| | | |
|--------------------|-------|-----|
| Larry Scott | Done! | 110 |
| Scott Alexander | | 97 |
| Bill Hydomako | | 55 |
| Sandy Ferguson | | 23 |
| Mike Oosterlaken | | 20 |
| Donna-Lee May | | 14 |
| 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

| | | |
|------------------|-------|----|
| Brent Gratias | Done! | 36 |
| Mike Oosterlaken | | 32 |
| Anna Clancy | | 24 |

EXPLORE the UNIVERSE

Certified for Certificate:

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

Katelyn Metanczuk 15

Isabel Williamson Lunar Observing Certificate

Norma Jensen New! 44

HERSCHEL 400 CLUB

Certified at 400 Objects:

D. Jeffrey, R. Huziak, D. Chatfield

| | |
|------------------|-----|
| Tenho Tuomi | 380 |
| Gord Sarty | 251 |
| Scott Alexander | 117 |
| Mike Oosterlaken | 68 |
| Sandy Ferguson | 18 |

HERSCHEL 400-II CLUB

Darrell Chatfield 315
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.

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

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.astroloegue.org/al/obsclubs/herschel/herschel400.html>

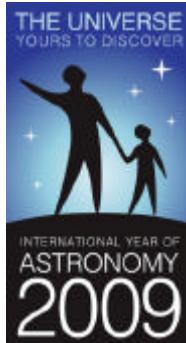
Copies of the Isabel Williamson Lunar Observing Program Guide can be purchased from Bruce Brandell.

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



IYA Observing Challenge

by Norma Jensen



This call to action was inspired by Centre member Sharon Dice of Prince Albert, who wrote that she has decided to mark the IYA by taking up the Chatfield Binocular Challenge (see above). Our Centre Executive thought it would be a great idea to use this as a catalyst for a group challenge.

So, during 2009, we encourage everyone to begin, work on, or complete any of the observing certificate programs described on the back page of *Saskatoon Skies*. Submit your progress reports to Co-Editor Christine Kulyk (clkulyk@sasktel.net) from time to time and at year's end. All will receive a special IYA Certificate and a prize for their participation. Ready, set: to your scopes!