

Saskatoon Skies

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

Vol. 41, No. 2

February 2010

Rick Receives Recognition



At the 2009 RASC General Assembly held in Saskatchewan last August, one of our Centre's most active members, Rick Huziak, was recognized with one of our Society's highest honours, the RASC Service Award. Saskatoon Centre President Barb Wright followed up with a surprise prize presented to Rick at our January meeting this year. See page 8 for the citation nominating Rick for the Service Award.

Photo by Jeff Swick



Saskatoon Centre
The Royal Astronomical Society of Canada
P.O. Box 317, RPO University
Saskatoon, SK S7N 4J8
WEBSITE:
<http://www.rasc.ca/saskatoon>
E-MAIL: wrightb@sasktel.net
TELEPHONE: (306) 249-1990

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 – Variable Stars	3
President's Message – Barb Wright	3
Minutes of the General Meeting, January 18 – Les Dickson	4
IYA Observers Rewarded – Norma Jensen & Christine Kulyk	5
Summary of Saskatoon Centre RASC Activities in 2009 – R. Waldron	5
Let There Be Light: The Alpenglow Effect – Mike Clancy	7
Sky Buys & Mirror Cells	7
RASC Service Award to Richard Huziak	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.

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 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.

**LIGHT POLLUTION
ABATEMENT
WEBSITE AT:
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 – 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

Feb 6	Observers Group – Dusk, Sleaford Observatory	Larry Scott	934-5801
Feb 8	RASC Executive Meeting - 6:30 pm, 175 Physics, U of S	Barb Wright	249-1990
Feb 8	RASC General Meeting - 7:30 pm, 175 Physics, U of S	Barb Wright	249-1990
Mar 6	Observers Group – 7:30 pm, Sleaford Observatory	Larry Scott	934-5801
Mar 13	Messier Marathon – Dusk, Sleaford Observatory	Larry Scott	934-5801
Mar 15	RASC Executive Meeting - 6:30 pm, 175 Physics, U of S	Barb Wright	249-1990
Mar 15	RASC General Meeting - 7:30 pm, 175 Physics, U of S	Barb Wright	249-1990
Apr 10	Observers Group – Dusk, Sleaford Observatory	Larry Scott	934-5801
Aug 12-14	Sask. Summer Star Party (Cypress Hills Inter-Prov. Park)	Barb Wright	249-1990

RASC SASKATOON CENTRE GENERAL MEETING

MONDAY, FEBRUARY 8, 7:30 PM
 Room 175, Physics Bldg., U of S

“An Introduction to Variable Stars for Fun & Science” By Rick Huziak

Variable stars represent the strangest stars in the sky. Previously presented at the Alberta George Moores Astronomy Workshop in October 2009, Rick Huziak’s talk introduces the weird world of variable stars. Learn what they look like and why they are that way, and what amateurs can contribute to the science and fun of observing them!

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

President’s Message

by Barb Wright

January’s tour of the Synchrotron (Canadian Light Source) with a change of scene for our meeting was a nice way to bring in the new year. Thank you, Mark de Jong, for organizing it all.

I am also very pleased that we are making a beginning for the work at Sleaford. It will be good to finally have the Patterson observatory operational, and the 16-inch scope functioning well. Please stay tuned so you can

heed the call for work bees!



Mark introducing the Synchrotron to the RASC group.

Photos by Tenho Tuomi

Minutes of the General Meeting, January 18, 2010

1. Meeting called to order at 8:35 pm.
2. Approval of the minutes of the previous (November 2009) General Meeting: Moved by Tenho Tuomi, seconded by Rick Huziak, and carried.
3. Fundraising: A Steak Night is planned by June 2010.
4. National Council: Rick Huziak reported that it is expected that new National By-Laws will include a family membership category. National wants to hire a full-time Executive Director, which will likely result in an increase in membership fees. A vote on the position is to take place at the 2010 GA in Fredericton.
5. IYA Wind-up: Ellen Dickson reported that nearly 5,800 people attended Saskatoon Centre and UofS IYA events in 2009.
6. Presentations: Norma Jensen and Barb Wright made presentations to various members of the Centre in recognition of observing accomplishments and services to the Centre.
7. Upcoming Events: We have been invited to set up at Wintershines January 23. We have been asked to give a presentation at the Children's Science Museum in Market Mall some Saturday. Patricia Gakis expressed some concern about having sufficient volunteers for our public event commitments.
8. Light Abatement: Rick Huziak reported on a number of issues and efforts underway in this new year, notably upcoming changes in Saskatchewan's environmental regulations and City of Saskatoon lighting policies.
9. Sleaford Site: Darrell Chatfield reported on maintenance activities.
10. Sleaford Committee: Rick Huziak presented the committee's plans for 2010: fix both the Patterson Dome and the 16" Meade telescope to make both fully functional, and renovate the Warmup Shelter to remove the cold storage room and expand the usable space. Rick moved that the Centre authorize this work, expected to cost approx. \$3,000, this year. Seconded by Cam McLelland. Carried.
11. Meeting adjourned at 10:00 pm.



Saskatoon Centre members had the chance to meet Jay Ingram, host of Discovery Channel's *Daily Planet*, when he gave the keynote address at Spectrum 2010 on January 16.

(L to R: Ellen & Les Dickson, Jay Ingram, Chris Martin)

Photos courtesy of Ellen Dickson

IYA Observers Rewarded

by Norma Jensen & Christine Kulyk

A hearty vote of thanks to all observers who did what they love and went out to explore and enjoy the night sky during the International Year of Astronomy. This past year, seven RASC Saskatoon Centre members added significantly to their observing-certificate lists, accomplishments which we were all able to track through the back page of *Saskatoon Skies*. At our January 18 meeting, prizes were handed out to the top performers in our IYA 2009 Observing Challenge.

Top prizes were awarded to two distant members, Wayne Schlapkohl from North Battleford and Sharon Dice from Prince Albert. Wayne is an enthusiastic new member to our club, and the high totals came from his work towards the Explore the Universe and Messier certificates. Sharon Dice recorded the second-highest tally for her work on the Explore the Universe certificate. Two crazed, or slightly crazed, lunar observers took the next places in line, working towards the Isabel Williamson Lunar Observing Certificate: Norma Jensen and Jeff Swick.

Further prizes were awarded to Barb Wright, for her increase in Messier objects spotted; Darrell Chatfield, for those Herschel 400-II faint fuzzies; and Tenho Tuomi, for adding significantly to his Herschel 400 list. Tenho not only managed to bring his Herschel 400s nearly to completion last year, he also achieved a personal-best score of 97 in his March Messier Marathon. (We can hardly wait to see you top that one, Tenho!)

Congratulations also to Ken Maher, for finally snagging the last of his Messiers, and to Kathleen Houston, for continuing to work on her Messier count. Warm thanks to Larry Scott, for faithfully shepherding us all through warm and not-so-warm Observers Group nights at Sleaford throughout the year.

The IYA may be over, but our love of astronomy will go on (as the song says). Congratulations to everyone who took a moment or more to observe the night sky during 2009 and, to steal a phrase, keep looking up!

Summary of Saskatoon Centre RASC Activities in 2009

by Ron Waldron, Centre Secretary

The year 2009 was a banner year for the Saskatoon Centre. Members were called on to work twice as hard and become much more involved. This was because three huge undertakings converged: the International Year of Astronomy, plus the club's decision to host the 2009 General Assembly in conjunction with our annual star party at Cypress Hills.

Barb Wright, our president, began the year by encouraging us to become involved as we prepared to host all three of these events. Our first opportunity came on March 28, when the Centre Mall in Saskatoon announced it would be shutting off its outdoor lighting in honour of Earth Day. Our members seized on the moment to set up telescopes in the parking lot and hand out IYA materials at the mall entrance. Clear skies cooperated, and participants got a real eye opener when the lights came back on as to how prevalent light pollution can be.

The first of two major IYA events, the "100 Hours of Astronomy," began at Fairhaven School. Over 200 parents and their children came out to hear Rick Huziak talk about the Buzzard Coulee Meteorite and Ron Waldron talk about how to get started in amateur astronomy. This was followed by hot chocolate and viewing through a half-dozen telescopes provided by our members. Sky conditions were ideal. Each participating family took home an envelope filled with IYA materials and information on how to become involved in amateur astronomy in Saskatoon. The event was so successful, the attenders prepaid to order 150 Galileoscopes.

The 100 Hours celebration continued the next two days and nights at Lakewood Civic Centre in the evening, at the Saskatoon Farmer's Market during the day, and finally in the evening at the Beaver Creek

Conservation Area. IYA materials continued to be distributed throughout all these events.

In May, our Events Coordinator, Patricia Gakis, arranged for us to set up telescopes at the Relay for Life sponsored by the Saskatoon Heart and Stroke Foundation. Many participants took time between their walks to come and gaze through telescopes set up on the periphery of the walking area. Again, sky conditions were excellent.

With the snow melting, many of our members were invited to hunt for meteorites at Buzzard Coulee, near Lloydminster. A rather large meteorite had fallen there the previous November. Many members took part, and many were successful in finding pieces of the meteorite.

As summer solstice approached, observing activities took somewhat of a backseat as members began planning in earnest for the Saskatchewan Summer Star Party and 2009 General Assembly. Although the weather for the entire weekend turned out to be the worst in the history of the SSSP, all were treated to a dynamic program of talks, tours, displays, and presentations. Centre members did an outstanding job of putting a "silver lining" in the cloud-covered sky by being excellent hosts for this joint event. Much credit must be given to our president, Barb Wright, and her committee of volunteers for both the planning and the execution.

In August, our newsletter Co-editors, Christine Kulyk and Tenho Tuomi, put out a special edition of the newsletter to celebrate the 40th anniversary of our Centre. The Centre was founded in November of 1969.

On September 2, many of our members were on hand to attend the opening of an astronomy art exhibit in the gallery at the Frances Morrison Library in Saskatoon. Entitled "Celebrating the Night Sky," the exhibit was prepared by member Kathleen Houston with artwork contributed by Centre members and others. The exhibit remained on display throughout the rest of the month.

Hot on the heels of this event, our members began to prepare for the second of two major IYA events, Galilean Nights, held on October 22-24. We celebrated by holding our annual Sleaford Open House to the general public. Despite cloudy weather, over 100 people showed up to view the facilities and

learn about astronomy through guided tours of the facilities and through star talks given by members Ron Waldron and Mike Clancy.

Throughout the year, our members led by Rick Huziak and his Light Abatement Committee made significant progress championing the cause of light-pollution abatement in Saskatoon and throughout the province of Saskatchewan. One of the major accomplishments this year was the establishment of Grasslands Provincial Park as a Dark Sky Preserve.

Ron Waldron continued to give regular star talks to legions of teachers and students attending Brightwater Environmental Camp, Mike Clancy and other members at a variety of Provincial Park locations, and Larry Scott sponsored monthly observing nights for all of our members out at Sleaford, 50 kilometres west of Saskatoon, where our Centre has most of its permanent observing facilities.

As IYA ended, member Ellen Dickson reported that our activities during the year had resulted in just under 6,000 people experiencing the joys of astronomy and perhaps their own personal "Galileo Moment." All in all, our members should be proud of their activities and accomplishments during this very special year in astronomy.

ALBERTA • PREMIUM • OPTICS

Your Authorized dealer for

WILLIAM OPTICS

SkyShed **POD**

LUNT SOLAR SYSTEMS

Unihedron Sky Quality Meter

ASTRONOMY TECHNOLOGIES

TMB Optical

More lines coming soon

403-537-0752

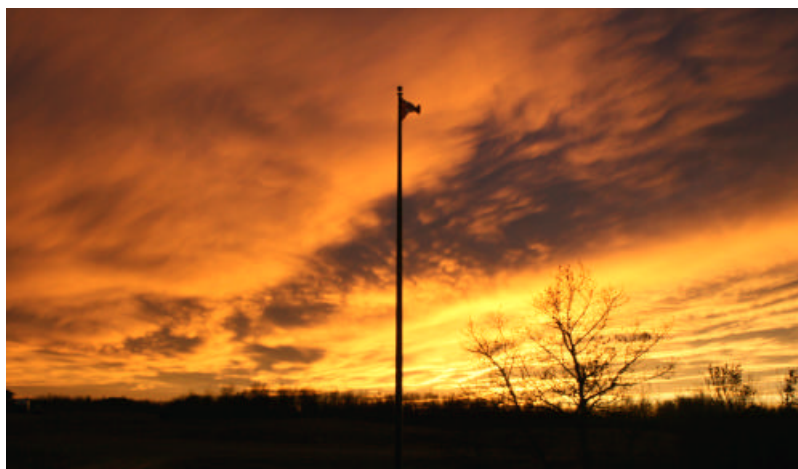
WWW.A-P-O.CA

Let There Be Light: The Alpenglow Effect

by Mike Clancy

The effect known as “alpenglow” happens when the Sun is just below the horizon and a red band is visible on the far horizon. While this phenomenon is generally seen in mountainous (or at the least, very hilly) areas, it can also be seen in somewhat flatter country due to the effects of backscattering.

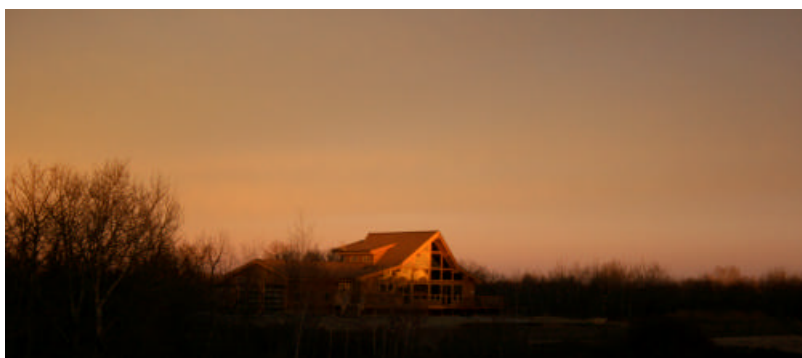
Since the Sun is below the horizon, there is no direct path for the light to reach the target (hills or mountains). Instead, light reflects off airborne aerosols such as ice or water low in the atmosphere. It is this circumstance that separates a normal sunrise or sunset from alpenglow, which is only seen just after sunrise or sunset.



Alpenglow at Hidden Ridge

Photo by Mike Clancy

As seen on the Prairies, it can be quite pretty, as the whole sky almost seems to be on fire. Such was the case at Hidden Ridge, as seen in the accompanying photo taken at 17:21 on November 17, 2009.



East-facing view showing the red band

Photo by Mike Clancy

According to the sunset calendar tool downloadable from the internet at www.sunrisesunset.co, the Sun had set at 17:11 and twilight would end at 17:49. The clouds clearly captured the Sun's setting rays to make this rather pleasing picture, taken facing south from the verandah! The actual red band can be seen in the second image, from the eastern view, taken 10 minutes earlier, just as the Sun went below the horizon.

SKY BUYS & MIRROR CELLS

The Saskatoon Centre's Swap and Sale Page

5" Astroscan telescope. Red exterior. Good condition.

8" Celestron 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).

RASC Service Award to Richard Huziak

by Les Dickson

The Executive and members of the Saskatoon Centre of the Royal Astronomical Society of Canada are honoured to present our nomination of Richard Huziak for the RASC's Service Award for his substantive service both to the Saskatoon Centre and to the RASC.

Richard has been an active member of the RASC and Saskatoon Centre since 1976. His notable accomplishments and activities encompass work on light-pollution abatement, public education and outreach, and important contributions to the Saskatoon Centre.

Richard Huziak has for at least 20 years been part of the international movement to eliminate light pollution. He is an active member of the RASC's Light Pollution Abatement Committee and the International Dark Sky Association. He has led local efforts to change civic policies regarding light pollution in the City of Saskatoon. He made many presentations on the subject to the Saskatoon City Council and the Saskatoon Environmental Advisory Committee. He worked closely with members of the committee to draft a comprehensive dark-sky lighting policy for consideration by the Council.

His persistence was rewarded when, in August 2008, Saskatoon City Council adopted the Dark-Sky Comprehensive and Integrated Outdoor Lighting Policy. This means that the City of Saskatoon can now formulate outdoor lighting policies that include the use of shielded, properly directed lights for all city facilities, city parking lots, parks, pathways, and streetlights. Prior to the adoption of this new policy, Richard was instrumental in having the City of Saskatoon undertake a test project in the Hampton Village subdivision in which all non-arterial roads would be lit using flat-lens full-cut-off light fixtures.

His most notable success has been on the regional level: Richard led efforts that resulted in the creation of the Cypress Hills Dark Sky Preserve (DSP) in 2004, the third DSP in Canada and currently the world's largest. He also aided efforts by RASC members in Alberta that resulted in the creation of the Beaver Hills DSP, which includes Elk Island National Park and the Cooking Lake/Blackfoot Provincial Recreation Area. Richard's anti-light-pollution activities have won him

awards from environmental groups. These awards include: Environmental Champion for Saskatchewan in 2005 and the Annual Environmental Activist Award in 2007 from The Saskatchewan Eco-Network.

Richard's commitment to public outreach and education is amply demonstrated by the over 1,100 talks and presentations he has given over the past 15 years to groups as diverse as elementary school classes, Beaver Creek Conservation Authority, public star parties, and the Saskatoon Engineering Society. Richard has led literally hundreds of public star nights and talks, often by himself, at numerous locations across Saskatchewan. He has freely given his time as a mentor to members of the Saskatoon Centre and the amateur astronomical community at large. He has taught astronomy and light pollution topics to the Cypress Hills Interprovincial Park interpretive staff; his efforts in promoting astronomy in that park have led to the creation of an astronomy interpretive program that has proven to be among the most popular programs in the park. Richard is truly dedicated and passionate about promoting and stimulating interest in astronomy and related activities and topics.

Richard Huziak has been involved in almost every aspect of the Centre's past 38 years. He has served on the Saskatoon Centre Executive in many positions, most notably as President from 1993 to 1997 and 2003 to 2004. He is an active member of the Saskatchewan Summer Star Party and General Assembly 2009 organizing committees. He has been a major contributor to the planning and construction of both the Rystrom and Sleaford observatory sites. He is currently a member of the Sleaford Joint Site Management Committee.

Richard's passionate promotion of amateur astronomy within the Centre and to the surrounding community is infectious and inspiring. Much of what the Saskatoon Centre of the RASC is today is due to the untiring devotion of Richard Huziak in fostering the life of the Centre. The Saskatoon Centre, and much of the National organization as well, owes much to Richard's many years of service. It is with great pride that we nominate Richard Huziak for the RASC Service Award.



The Planets This Month, February 2010

by Murray D. Paulson, RASC Edmonton Centre

Last month, **Mercury** sped between conjunction with the Sun and western elongation in an incredible 22 days. That elongation is long gone, and the chance to see it in the twilight as well. The return trip from the elongation to the next conjunction with the Sun will take twice as long. Mercury will be at superior conjunction in mid-March. If you would like to see it this month, it will have to be a daytime search with setting circles or a computer GoTo scope.

Venus is slowly coming out of conjunction with the Sun this month and will not emerge into visibility in the evening sky until sometime late in February. Venus shines at magnitude -3.9 and will show a 10" disk in the eyepiece.

Have you been watching **Mars**? There has been the occasional great night where the seeing has cooperated. The polar cap is big and dominates the view; and on one occasion, Syrtis Major dominated the view. The month started off with Mars shining at magnitude -1.2 and showing a 13.8" disk. That disk is certainly small, but because Mars has such high brightness and contrast, when the seeing holds, you can dial up dizzying magnifications. I routinely use 375 power if the seeing is "ok" and I wait for the better moments to come along. If the seeing is truly great, the sky is the limit! I have included a graphic that I generated using Guide to show the features you should be able to see over the four weeks of this month. Note the diagrams are with North up and not mirror reversed. If you check with the ALPO Mars section, you can see the latest observing alerts for

Mars. There is a dust streak across the north polar cap, and some amateurs have captured the sand storm billowing over that cap. Very cool indeed. By the beginning of next month, you will notice that Mars is starting to shrink in the eyepiece, 11.4" and magnitude -0.4, so get it while it is close.

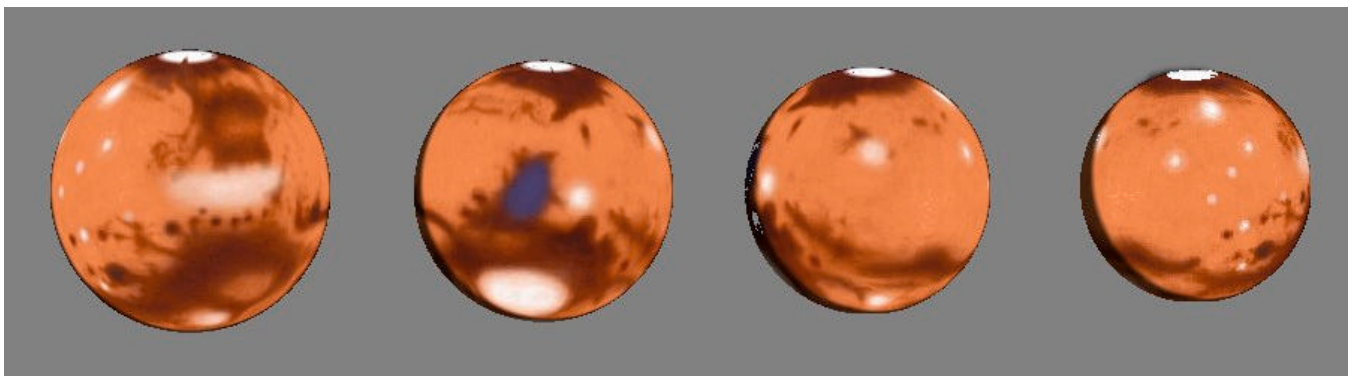
[Editor's note: A good place to see what Mars features are visible is the Mars Profiler:

<http://www.skyandtelescope.com/observing/objects/planets/3307831.html>]

Jupiter has a date with the Sun this month on February 28, and will disappear into the evening twilight fairly quickly. It shines at magnitude -2.0 and shows a 33.2" disk at the beginning of the month.

Saturn now rises at 9:30 pm and sits in the constellation of Virgo. It shines at magnitude 0.7 at the beginning of the month and will show a 19" disk in the eyepiece. The rings start off the month tipped down at 4.5 degrees. Over the month, the rings will tip down to 3.6 degrees as the Earth moves our vantage point a little closer to opposition. By the first week of March, Saturn will shine at magnitude 0.5 and the disk will expand to 19.5". Opposition will be in late March, so we will have two good planets to look forward to!

On March 3, Venus passes 37' below **Uranus**, which shines at magnitude 5.9. Uranus will be 3.35" at the time. Note that Uranus is 21 AU away from us, while Venus is only 1.65 AU distant. They will set about an hour after sunset, and this shouldn't be too difficult a hunt.



7 Feb

14 Feb

28 Feb

7 Mar

Mars graphics generated by Guide 7.0

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. 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

Norma Jensen	74
Jeff Swick	16

EXPLORE the UNIVERSE

Certified at 55 to 110 Objects:

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

Wayne Schlapkohl	Done	55
Sharon Dice		31

HERSCHEL 400 CLUB

Certified at 400 Objects:

D. Jeffrey, R. Huziak, D. Chatfield

Tenho Tuomi	398
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.

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

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

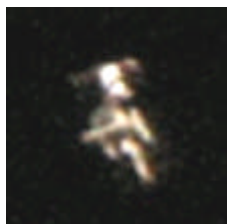
Program details can be found at: <http://www.rasc.ca/williamson/index.shtml>



Observers Group Notes

by Larry Scott

Observers Group for January 9 was clouded out, however . . . Norma, Barb, and I got out to Sleaford the night before for some stargazing. Skies were clear and steady early on, although cold at -22°C . We set up, and observed, and went in the warmup shelter.



[International Space Station, January 23]

There was more time spent in the shelter than observing, but the observing was good. We culminated with M42 using an OIII filter, definitely a crowd favourite.

Next Observers Group is scheduled for February 6, with dark skies from the 1st to the 16th. I will not be able to attend, so anyone interested in volunteering for that night, please let me know. Following that will be



[Moon Halo, December 31]

the March 6 Observers Group and the March 13 Messier Marathon. Any questions, please ask.

Photos by Garry Stone