

Saskatoon Skies

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

Vol. 37
No. 4
April
2006

Messier Marathon 2006



Photo by Jeff Swick.

I took this shot last night just before heading home from Sleaford at around 1:30 or so. A nice faint aurora to the north. I'll say one thing about Saskatchewan ... we have one of the best "back yards" in North America (if not a tad chilly at times).

In This Issue:

Membership Information, Bottle Drive, U of S Observatory Hours	2
Calendar of Events; Books For Sale; Sky Buys & Mirror Cells	3
Minutes of General Meeting; Minutes of Executive Meeting	4
Fund Raising Dinner	4
Messier Marathon 2006	5
Messier Marathon – Air Canada Style	5
Messier Marathon at Lucky Lake	6
Activities Coordinator Report	6
Helping Hand at the Messier Marathon	7
Saskatchewan Summer Star Party	7
A New Star, Which May Be Yours; Ask AstroNut	8
How the Sleaford Observatory Works	9
The Messier, H-400 & H-400II, FNGC, Bino & EtU Club	10
RASC Observers Group Notes	10



Saskatoon Centre
The Royal Astronomical Society of Canada
P.O. Box 317, RPO University
Saskatoon, SK S7N 4J8

WEBSITE:
www.usask.ca/psychology/sarty/rasc
E-MAIL: rmwaldron@shaw.ca
TELEPHONE: (306) 382-9428

MEMBERSHIP? IT'S NEVER TOO LATE TO JOIN!

Regular: \$65.00 /year Youth: \$34.25 /year Lifetime: \$1100

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, Mike Clancy, or renew through the National Office and let Mike 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 (bimonthly)
- SkyNews Magazine (bimonthly)

- use of the Centre library
- 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 fax 306-659-2170.

SASKATOON CENTRE'S MAIN OFFICERS:

President – Ron Waldron, 382-9428

Secretary – Al Hartridge, 373-0034

Vice-President – Garry Stone, 857-4707

Treasurer – Norma Jensen, 244-7360



BOTTLE DRIVE & CANADIAN TIRE \$

by Darrell Chatfield

Thanks to recent donations from Al/Graham Hartridge and Walter Essar we have collected \$172.00 in Canadian Tire Money! Please keep bringing your bottles and Canadian Tire Money to the General meetings. I will collect them after the meeting concludes. If you cannot make it to the meeting but would like to contribute, please call me at 374-9278.

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

About this Newsletter...

Newsletter Editors – Tenho Tuomi, Ken Maher **Copy & Collate**– Rick Huziak **Labels & Temps** – Mike Clancy **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 articles. 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 – preferred as plain unformatted ASCII text files without line breaks. Images sent by e-mail should be attached .JPGs (.GIFs also accepted). Send e-mail submissions to the editor at <tuomi@sasktel.net>. Please send articles in "generic" formats with simple formatting – one tab at the beginning of paragraphs, one space after commas and periods. 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 for rates. Members can advertise non-commercial items free of charge.

RASC CALENDAR OF EVENTS

Apr. 17	RASC Executive Meeting -- 6:30 p.m., 175 Physics, U of S	Ron Waldron	382-9428
Apr. 17	RASC General Meeting -- 7:30 p.m., 175 Physics, U of S	Ron Waldron	382-9428
Apr. 21-23	George Moore's Astronomy Workshop – Edmonton Centre	Sherry Campbell	(403) 433-1516
Apr. 28	Observers Group - 9:00 p.m., Sleaford Observatory (Date Changed)	Larry Scott	934-5801
May 5	Astronomy Day , Lakewood Civic Centre	Larry Scott	934-5801
May 6	Astronomy Day , Lawson Height's Mall & Beaver Creek	Larry Scott	934-5801
May 6	Astronomy Day , Gateway Mall & Prime Ministers' Park (PA)	Ken Maher	763-8493
May 13	Fund Raising Dinner , Mulberry's (Sturdy Stone)	Norma Jensen	244-7360
May 15	RASC Executive Meeting -- 6:30 p.m., 175 Physics, U of S	Ron Waldron	382-9428
May 15	RASC General Meeting -- 7:30 p.m., 175 Physics, U of S	Ron Waldron	382-9428
May 18-22	2006 RASC General Assembly , Ottawa	--	--
May 19	Observers Group - 10:00 p.m., Sleaford Observatory	Larry Scott	934-5801
Aug. 24-27	Saskatchewan Summer Star Party - Cypress Hills Inter-provincial Park	Barb Wright	249-1990



BOOKS FOR SALE

by Bruce Brandell, Sales Coordinator

All items will be available at our next meeting or call 249-1119, or email bruce_brandell@yahoo.com

Title	Author	# Avail	Price
Calendars			
RASC 2006	RASC	2	\$5.00
Books			
The Backyard Astronomer's Guide	Dickinson & Dyer	2	\$45.00
Night Sky Atlas	R. Scagell	3	\$27.00
The Moon Observer's Guide	P. Grego	1	\$13.00
Firefly Astronomy Dictionary	Firefly	1	\$13.00
Skyways – Astronomy Handbook for Teachers	M.L. Whitehorse	3	\$20.00
The Beginner's Observer's Guide	L. Enright	1	\$19.00
Observer's Handbook 2006	RASC	4	16.00
Variable Star Charts [CD]	AAVSO	1	5.00
Astrophotography	G.N. Patterson	lots	\$3.00
Miscellaneous			
RASC Centennial Mug		2	\$5.00
RASC Stickers, blue or white		lots	\$1.00
SSSP 2001 Pin (Summer Triangle)		17	\$2.00
SSSP 2002 Pin (Comet)		29	\$2.00

Why Not Buy a \$20.00 gift certificate to J.D.Peppercorns restaurant in Saskatoon?



Half the ticket cost goes to RASC.

Help us reach our fundraising goal of \$500.00!

Certificate sales at all RASC meetings. Or e-mail Barb_wrightb@sasktel.net

SKY BUYS & MIRROR CELLS

The Saskatoon Centre's Swap and Sale Page!

For Loan to Members: Slide set for talks on general astronomy and light pollution. You can borrow this set any time you want to give a talk to your favourite group. Contact Rick Huziak at 665-3392.

For Sale: 7 X 50 Bushnell Extra Wide Angle Binoculars \$40.00 Firm; 2X Omcon Barlow - \$20.00; 1 New 25mm Antares W70 Eyepiece - \$60.00 Contact Ron Waldron at 382-9428 or by e-mail at rmwaldron@shaw.ca

A Bright Idea !



*Andrea Swick takes time out of her Sunday afternoon to check out sunspot number 865
Photo by Jeff Swick*

MINUTES OF THE EXECUTIVE MEETING

March 20, 2006

by Al Hartridge

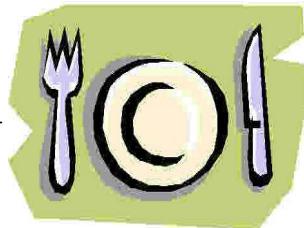
1. Meeting called to order at 6:30 p.m.
2. Minutes of the Feb. 20, 2006 meeting approved. Moved by Darrell Chatfield, seconded by Ellen Dickson and carried.
3. Messier Marathon update: The weather forecast for this upcoming Friday appears good.
4. Astronomy Day Planning Update: a display will be held on May 5th at Lawson Height Mall, following this a Gastronomy will take place and later a star night and talk will occur at Beaver Creek. A side walk event will also be held at Lakewood Civic Center on the Friday night before.
5. 20 inch telescope: The dept. of Physics at the U of S is entertaining the purchase of a large telescope to be run by remote control at Sleaford. Yannis was wondering whether or not our centre would be willing to contribute financially or with labor to the project in return for time on the new telescope.
6. Downloading the Journal: Ron Waldron indicated it was very easy to download the journal and you can select just the pages you want.
7. New Speakers: any one wanting to present a topic at general meeting is encouraged let Ron know.
8. Sleaford Dome: may be replaced in the future with a used dome which is in better condition than the one on the dome presently. A motion was made to allow Bill Hydomako to spend up to \$500.00 for hardware etc to get ready for replacement. Moved by Les Dickson, seconded by Garry Stone and carried.
9. Meeting adjourned at 7:30 p.m.

MINUTES OF THE GENERAL MEETING March 20, 2006

by Al Hartridge

1. Meeting called to order at 7:40 p.m.
2. Events: Messier Marathon will be held this coming Friday and also on Saturday if clear. Astronomy Day will be at Lawson Heights Mall, there will also be a gastronomy supper followed by a star night and talk at Beaver Creek. A sidewalk astronomy event will also take place at Lakewood Civic Center on the Friday evening before.
3. Fundraising: Darrell mentioned that additional Canadian Tire Money has been received, Walter has also made a donation, the Quilt for the upcoming raffle was displayed and on May 13th a steak night will be held at Mulberry's restaurant.
4. Membership: as of this month there are 76 members, and 1 temporary member. Two members are in default of dues. The membership file is being delivered by email to the executive members and selected committee members.
5. Saskatchewan Light Abatement committee: Norma has sent an article to the Mayor of Saskatoon with some highlighted areas. She has talked about an article in the Globe and Mail by Dan Falk.
6. SSSP: arranged meeting with Regina cancelled because of poor highway conditions. A new meeting is scheduled at Craik on Mar.26. The main speaker this year will be Scott Young. There will also be a presentation at the park on First Nations astronomy. Al Dyer will give a workshop on Friday 1 to 4 hours, on digital SLR astronomy at a cost of \$30.00 per person. Kevin Black may also give an introductory talk. Al Dyer will also present a talk on recent photos he has taken.
7. Award presented to Ken Maher for completing the Chatfield binocular list.
8. 20 inch telescope: please see executive minutes.
9. Presentations:
 - The Framis Group Inc. Dark Sky Calculator- Les Dickson
 - George Moore Astronomy Workshop- Sherry Campbell
 - Six Inch John Dobson Solar Telescope- Rick Huziak
10. Meeting Adjourned at 9:35 p.m.

FUND RAISING DINNER



Mulberry's (sturdy stone) - 124-3rd Ave North
May 13th (full moon), dinner at 6 - cocktails at 5:30

\$12.00 per person
ticket sales at March and April meetings.

Silent auction (members to submit to Barb or Norma),

(REQUEST FOR ITEMS before May 1st.)

50-50 draw, and Door Prizes

No ticket purchases after May 8th

contact Barb (249-1990) wrightb@sasktel.net,
or Norma (244-7360) njensen@scs.sk.ca.

Messier Marathon 2006

by Larry Scott



Messier Marathon, March 24th, 2006. Well, it was a little cold and made colder by a light breeze out of the east. The skies were clear, but struggled to provide average seeing. It doesn't sound very good for observing, but it turned out to be a nice night in other ways. Apparently no one really

wanted to do a Messier Marathon this year. As soon as it was dark the ten stalwart members who showed up went to their scopes and started doing their own things. Members were looking at Messier objects, not to race through them, but to observe them for their Messier Certificate. Others were searching for their Finest NGC and Herschel objects. Some played with their new scopes and new eyepieces. Some played with Scooby the Astro-Dog.

Just so this looks like an actual report I'll say I found maybe a dozen Messier objects. More of a stroll than a marathon. It was a pleasant evening with conversation, coffee, and some observing. Not exactly a Messier Marathon, but there's always next time. (p.s. Thanks to Graham for shoveling that truckload of snow.)

The Messier Marathon - Air Canada Style

by Mike Clancy

Friday, 24Mar06, was to be the club's annual Messier Marathon, an event I always look forward to with some glee as it is a wonderful chance to do some quality observing with some quality people.

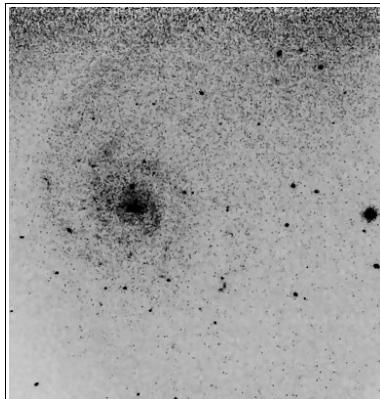
Alas, I was flying back from Baltimore, Maryland in the uncaring arms of one of Air Canada's modern jets; I wouldn't land in Saskatoon until 2335 hrs that night, and would require a major renewal in terms of a hot shower and clean clothes before I would be again allowed in polite company.

Thus, I would miss the Messier Marathon gathering at Sleaford, particularly as there was some scattered cloud below us as we traveled from Toronto. Mind you, staring morosely out the cabin porthole I noticed the bright and shining star Sirius in Canis Major and the vaguely wedge-shaped triangle of stars at that constellations' base. From here, I thought smugly to myself, I should be able to make out some of the Messier objects in the area. I was, after all, at approximately 30,000 feet in altitude, flying west at a steady 520 mph.

While neither of these temporal artifacts would appreciably alter the position of the stars relative to my own, I could honestly state that I would never have clearer skies! Indeed, the only problem I was having was with the starboard wings navigation lights, which the pilot was unwilling to turn off for my benefit, the selfish bum! Ah, well; on to observing: I was using my trusty "Human Eyeball Mark I" binocular system (focal length approximately 50 cm to infinity, magnification 1.0)

and managed to pick up a dim smudge below Sirius that was most probably M41 as well as a small grouping of stars to the right of dCanis Major which was Collinder 121. Alas, M93 and M46/47, all to the left of these objects, were far too dim for me to pick up with this limited, ancient (almost 50 years old) optical equipment.

Last, but certainly not least, I swung my gaze toward that old stalwart Orion, and the Orion Nebula (M43/42) which I picked out as a dim smudge around the second star in Orion's Sword. Rigel and Betelgeuse shone brightly, and I had no trouble picking out Saiph and Meissa, the other two stars at the arms and knees of this constellation respectively.



*M101. Pinwheel Galaxy: 32 15-second 100-power exposures taken with a Canon A75 digital camera, stacked with RegiStax and enhanced with Paint Shop Pro.
By Tenho Tuomi*

dozen or so prominent stars on my Air Canada Messier Marathon.

I hope my land-bound comrades had better luck; the bums at Air Canada lost my luggage with duty-free rum ration enclosed!

Messier Marathon at Lucky Lake

by Tenho Tuomi

Garry Stone and I decided to roll Astronomy Day and Messier Marathon into one weekend by taking our telescopes to the Lucky Lake School Science Fair for display on Thursday March 23, as I had done three years earlier. Several students and parents stopped to look at our table, and through the telescope that was focused on the far wall.



In the evening we set up for public viewing, but only two hardy souls braved the strong SE wind to come for a look even though we were set up in the wind-shade side of the school, where the bright street light was. By the time we left, we were so cold (we had come unprepared clothes-wise) that we had no inclination to drive to Sleaford the

next evening unless it calmed down or warmed up considerably, even though we had so much enjoyed our trips there in other years.

We decided we would do our own private Messier Marathons. However Friday night was completely cloudy for me. Garry reported seeing Sirius and a few stars straight overhead.

p.s. As a warm up to the Messier Marathon I did get out March 17 to count Messiers. It was too windy to open the observatory so I used my 80mm "Messier Killer" handheld, and counted 11 Messiers in half an hour or so. The Zodiacal light was beautiful that night.

Activities Coordinator Report

by Jeff Swick

So here I am sheepishly submitting my report to Tenho late yet again. I think the reason he is such a good astronomer is because he is so patient.

As the first order of business I would really like to extend a big THANK YOU to Larry Scott who has stepped up as interim observing co-coordinator. The key word there being interim. Larry is looking for assistance perhaps on a rotating basis so if you're interested please reach out to Larry to offer assistance.

We have a big weekend planned for "Astronomy Day" on the May 05/06 weekend. On Friday evening the 5th we will be hosting sidewalk astronomy on the front lawn of the Lakeview Civic Center. This facility is a focus point in the community, containing a gym, swimming pool and a library. We were there last year to great success. One nice thing is that you can drive right up and unload your gear, and there is plenty of free paved parking.



Earthshine. New moon, one day after the total solar eclipse of March 29 by Garry Stone

The next day we are at the mall in Lawson Heights with our mall display. A great way to introduce our hobby. We will be in need of volunteers and I will be reaching out to see who is attending and co-coordinating resources etc. One thing I need to insert here is that **we must stay until 6:00 p.m.** as we have signed a contract.

This has been a great success to our club on two fronts. One, of course, is the outreach to the general public, but also a great time for everyone to catch up with each other and shoot the breeze. Think of it as an extended coffee break at the general meeting.

We will break for some "Gastronomy" at a local restaurant and then head out to the Beaver Creek conservation area for a public star night. We will be having a slide show in the auditorium there so the event goes rain or shine. I'd note here that last year we were clouded out and we still had people coming out until well after 10:30.

We should be getting some TV time to help with the publicity. More information will be passed on via the RASC Yahoo group for the Saskatoon center.

Also speaking of the Yahoo list I hope you will all contribute to the ongoing discussion regarding the proposal from the University Physics department regarding expansion of the facilities as the topic is up for discussion at the general meeting. We also use this group to co-ordinate observing activities and various projects.

Please let me finish up this report by stating publicly and for the record that our newsletter editor Tenho is a very kind and patient man who would never kick someone's ass just because they are late on the deadline (consistently).

Anyone needing assistance in signing on to the Yahoo Group can email at jjswic@shaw.ca

Helping Hand at the Messier Marathon

by Darrel Chatfield

Hello everyone! I thought I would write a small article regarding my observing session on Friday evening, Mar 24/06. It has been a while since I have written anything, but I wanted to give Tenho a break from always having to put his (nice) picture on the cover of Saskatoon Skies.

I was debating as to whether I would even go out or not, until I had a few telephone conversations with Norma and Barb. It was Barb who convinced me to go out finally ... something about what would happen to my "students" if I did not show up :-)

I found the highway out to Sleaford to be in fine shape, but the grid roads were a little bit worse with all the snow that had been deposited out there. I had to slow down to 60K from my usual 80-90K. I guess that way I got there in one piece.

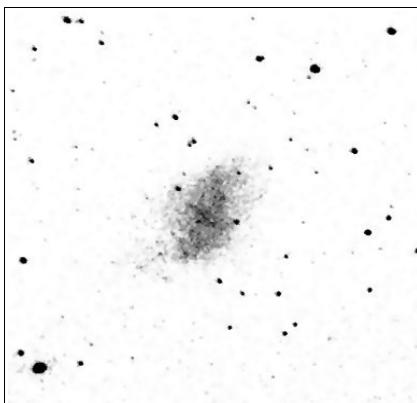
After I arrived at Sleaford around 9 p.m., I set up to the South of the University roll-off. Other observers in that area were Larry, Jeff, Norma, and Barb. Some days I wish I had a dob, just for the ease of set-up. It takes about 1/2 an hour for me before I see starlight. Then it takes another hour for the scope to cool down enough to see that what I thought were double stars in the first half hour of seeing were actually single stars, with major diffraction!!! (It pays to cool your scope.)

Anyway, I was finally able to start viewing on other things first. My choice was a fine double star in Cancer, just above M44 (the Praesepe) open cluster. It turned out to be a nice double, with quite a wide separation. The primary star was yellow, with the secondary star being smaller, and blue in color. I also saw nearby Saturn, but only briefly.

Then I went on to try and spy NGC 4136, a galaxy in Coma Berenices, mag. 11.0. It was quite easy to find, and quite bright. It appeared round, with a bright core. The outer envelope was also seen, but was dimmer than the core. I then went on to look for a few more faint galaxies in the same area, and was having a hard time. They were both about the 12 mag. range. I just could not see them. For those kinds of magnitudes, you need a fairly clear sky. (The sky was not great at that point, but got somewhat better as time went on).

I decided to go over to see Brent Burlinghams' new addition to his family.....(his telescope family, that is). He bought some digital setting circles a while back, and I was anxious to see how they worked. I asked him to dial up

those two galaxies I could not find, and so he did just that. I was able to see them right away, even though they were hard to spot. Brent finally saw them, after some coaxing that they were really there!!



M1, the Crab nebula, with 32 15-second pictures stacked. The 8 inch Meade Newtonian drive has never been good enough for long exposure film pictures but it handles 15 second pictures ok which can be aligned and stacked with RegiStax.

By Tenho Tuomi

I also went and helped Les Dickson, who was set up near Brent. I was able to verify a galaxy he needed for his Messier list.

The warm up shelter was the next stop. It seemed like we were all there at that point. The wind had picked up, and was blowing from the South East, which made it quite cold.

I returned to my scope, and had a visit with Barb. She was using her binoculars that night. I was able to point her in the right direction to find M36, 37, and 38. Later, I helped Norma with a few questions about the sky. After that, I was back trying to see more faint objects. At one point, I was turning the chart on my Sky Atlas 2000, only to rip the page almost a quarter of the way. I was not impressed!! However, the sky allowed me to see a total of 6 new Herschel II's. It is getting harder and harder to see these objects, because they are in the range of 11.5-13 mag.

I would not have gone out if it hadn't been for my two "students" namely Barb and Norma. Thank you girls for convincing me to make the trek out to our site. It turned out to be quite a good night, since my last viewing session had been at SSSP/05! I had been suffering from photon deprivation, and didn't even know it.

Saskatchewan Summer Star Party

by Barb Wright

On March 26, Saskatoon and Regina SSSP committee members met at the Eco-centre in Craik. It was a productive meeting with 10 people in attendance. We discussed Regina's T-shirt plans. Regina Centre is including a bunnyhug (or hoodie) in their lineup this year, responding to many requests. A picture of their design will be on the website as soon as it is available.

The registration brochure is expected to be ready for our next meeting and will be distributed to other centres. The SSSP weekend is taking shape with presentations, speakers, a workshop, teleconference with Starfest, and of course, observing the skies.

A New Star, Which May be Yours

by Myrna Stone

The Royal Astronomy Society, Saskatoon Centre can begin to plan now how best to sell tickets for this fall's raffle. The last week in January I was able to log about 41 hours of quilting time, completing a quarter of this project. Then it was off to Toronto to wait for the arrival of our grandchild, another boy. It so happened that I stayed for a whole month to help out! I didn't mind. Babies are wonderful.



I arrived back in Saskatoon on the 1st of March. On March the 4th I loaded my needles and began stitching, working anywhere from 7 to 12 hours a day until it was completed on March 17. I wasn't seeing green ... just many shades of blue. During this last stretch I didn't sweep or wash floors, dust the furniture, did little cooking (still had freezer food left that Garry hadn't used while I was gone). Garry helped out a lot, doing the normal household chores that I pretended didn't exist. He wanted pancakes for supper one evening to which I replied "the Joy of Cooking is on

the kitchen cupboard. Do what it says". From the kitchen came the question "What spoon do I use to stir it". My reply was " Use a fork, you want the dough to be a little lumpy". The end result was great. Now that my life is back to normal, I must pay attention to all the things I neglected so I could finish my commitment to this project.

There were quite a few trips to the farm here and to Saskatoon as Marianne Hydomako cut all those little pieces that had to be sewed together. Barb Wright, Marianne and I all shared in the sewing, the undoing of "glitches" and the redoing of the same. There were a lot of seams to adjust. Marianne was left with most of the sewing towards the end of the project. We all had "health matters" to be concerned about during this time and this project was probably more of a boon than a bother. I did enjoy hand quilting very much.



Ask AstroNut

The **Ask AstroNut** column is an anonymous question and answer advice column, where you can ask any question you want, boneheaded or brilliant, and the editor will find someone who will give you a somewhat educated answer.

Dear AstroNut: Why does the date of the Spring Equinox vary from year to year?

AstroNut answers: Looking at recent RASC Observer's Handbooks I see the following dates/times (GMT) for the spring Equinox:

2006 March 20 18h 26m
2005 March 20 12h 33m
2004 March 20 6h 49m
2003 March 21 1h 0m
2002 March 20 19h 16m

As you can see Equinoxes are early during leap years and then become later by about 6 hours every year until the next leap year. The Equinox is the latest in the years just before leap years and can fall on the 21st in some time zones, as in England (GMT).

In old Handbooks I see the following dates/times (GMT) for the spring Equinoxes on leap years:

1980 March 20 11h 10m
1972 March 20 12h 22m
1968 March 20 13h 22m
1964 March 20 14h 10m

The Equinox gradually creeps earlier by about 1 hour every 4 years. That's why the century years not divisible by 400 are not leap years to keep things like equinoxes in line.

In our CST time zone, the spring Equinox was on March 21 from 1901 to 1903. From 1904 to 1971 it varied between March 20 and 21. It is on March 20 from 1972 to 2007. From 2006 to the end of the century it will vary between March 19 and 20. If you remember the spring Equinox being on March 21, you are middle aged, or from a time zone east of here, or your calendar reports Equinoxes in EST, or Universal Time.

Check the Internet for many good Equinox calculators.

How the Sleaford Observatory Works

by Richard Huziak

Most members, I'm sure, know we own and operate an observatory – the Sleaford Observatory, to be exact. However, members may not know the exact circumstances of how we got there and how the observatory is operated.

The Sleaford Observatory began construction in 1996 when we decided to move our old observatory from the Rystrom farm, just east of Grasswood Esso, 5 km south of Saskatoon. Two years earlier, we realized that we had to move due to encroaching light pollution and a long-term stay that was wearing out its welcome. At the same time, the U of S Physics Department and the U of S Astronomy Club also were looking for a site for a permanent installation. As a result, we joined forces and eventually found the Sleaford School site.

How to operate the observatory became an immediate issue with 3 parties involved. As it turns out, the U of S Astronomy Club was kind of absorbed into the Physics Department, and the Physics Department and the RASC created a Legal Partnership Agreement which set out terms of ownership, operation, dispute resolution, eviction, resale, expense sharing, building standards, insurance, infrastructure definition, etc: the terms required by normal partnership agreements. It was decided best if the U of S bought the land because of their stability and tax advantages, and the RASC become a legal partner, using the land permanently under the agreement. Under the agreement, the U of S and RASC pay equal share for permanent fixtures at the site called "Infrastructure" and normal operating expenses, but each group builds and maintains their solely-owned facilities independently. All building and site administration is subject to approval by the Sleaford Site Joint Committee, made up of equal numbers of U of S and RASC representatives. (The current committee consists of Yannis Pahatouropoulou, Stan Shadick, Rick Huziak and Les Dickson). The partnership agreement also allows the inter-usage of equipment by both groups.

Inter-usage allows the U of S students to use the warm-up shelter and washroom, owned by the RASC, and the RASC to use the Roll-off Observatory owned by the U of S and telescopes on the roof of the Physics building, since they are an extension of the Sleaford Observatory. The committee has set some restrictions on the use of the Rystrom Dome and the Roll-off Observatory, since the Rystrom Dome is not quite working, thus not to be used by U of S student at this time, and the Roll-off Observatory is restricted to those who have received training in the use of the telescopes and have received a key from the U of S. In addition, an understanding is in place that instrumented telescopes cannot be used by the RASC during lab times or for visual observing while the instruments are in place, since removing and replacing them require long set-up and refocusing periods. However, use of these facilities is open

at other time, pending training. The committee meets at least once a year to review and amend rules of operation.

The Sleaford Observatory itself does not operate unattended. For example monthly and yearly maintenance is required. Snow removal and grass cutting is tendered by the U of S to the RM of Colonsay, and from time to time, generally when we decide it is necessary, the RM clears the snow and cuts the grass. However, the final cutting of grass around buildings and snow shoveling of drifts off the steps falls to the users of the site, whomever they may be. The magic wand doesn't wave and the work doesn't occur spontaneously, so if you are a user of the observatory and see long grass or deep snow, it becomes your responsibility to cut or shovel. (There is a mower and gas in the school and shovels are in the warm-up shelter or cold storage).

Also, standard maintenance and improvements are the job of work teams generally organized from the site users. However, if you notice anything broken at the site or needing any fixes or improvements, either fix them yourself or if not practical, suggestions should be forwarded to Bill Hydomako, Rick Huziak or Darrell Chatfield for co-ordination. Recent site improvements were the changing of the bathroom door to a steel door, replacement of the broken main red-light slide switch and replacement of the telephone and outside phone bell. Near-future work will involve installing a dead bolt on the bathroom door, installing an exhaust fan in the warm-up shelter, and replacing and motorizing the dome on the Rystrom Dome. Within the year, we also want to begin the construction of an observatory to house the 16-inch telescope. The location of this observatory and the pending large U of S telescope have been negotiated and pre-determined by the Site Committee.

Supplies at the site are also non-magical and do not appear by themselves. Some necessary items such as toilet paper, light bulbs, paint and gasoline are bought from donated Canadian Tire money and funds allocated by the RASC executive from the site budget. However some items, such as coffee, creamer, napkins, etc, if not the generous gift from over-buying by the SSSP, may be donated by members. Should site supplies run low (and right now they are not low), you should fill out a Site Supply Request list tacked up on the Warm-up Shelter wall and get it to one of the site people.

All members in good standing have the right to hold a key the observatory, so if you don't have one and want to be able to use the facility on your own time, please ask to be trained, and for a \$5.00 key-cutting fee, you will be given your own key ... and the honour of helping with the maintenance and up-keep.

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 40 Herschel II
Explore the Universe, or 35 Binocular Objects 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, **Mike Clancy**

Les Dickson	Up!	108
Brent Burlingham	Up!	107
Ken Maher	Up!	105
Brent Gratias		96
Mike Oosterlaken		93
Lorne Jensen		89
Margo Miller		77
Wade Selvig		75
Kathleen Houston		72
Garry Stone		57
Ellen Dickson		29
Norma Jensen		31
Brian Friesen		15
Barb Wright		6

FINEST NGC CLUB

Certified at 110 Objects:

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

Larry Scott	Up! & Done!	110
Scott Alexander		97
Bill Hydomako		55
Sandy Ferguson		23
Mike Oosterlaken		20
Mike Clancy		7
George Charpentier		4

Chatfield BINOCULAR

CERTIFICATE

Certified at 35 Objects:

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

Brent Gratias		36
Mike Oosterlaken		32
Anna Clancy		24

EXPLORE the UNIVERSE

Certified for Certificate:

M.Clancy, T.Tuomi

HERSCHEL 400 CLUB

Certified at 400 Objects:

D.Jeffrey, R.Huziak, D.Chatfield

Gord Sarty	251
Tenho Tuomi	220
Scott Alexander	117
Mike Oosterlaken	68
Sandy Ferguson	18

HERSCHEL 400-II CLUB

Certified at 400 Objects:

Darrell Chatfield	Up!	256
Richard 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 web site. The Herschel 400 list is available at the web site listed below. 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/observe.htm>

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

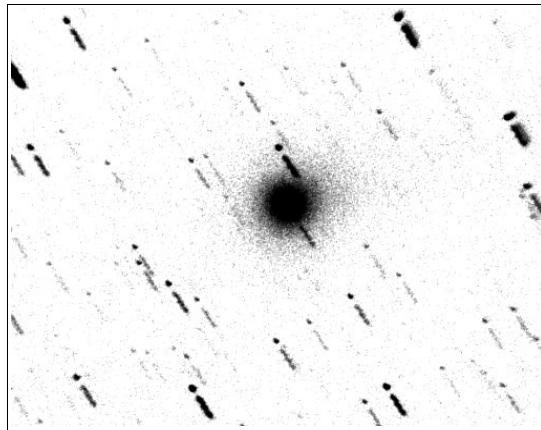
<http://www.astroleague.org/al/obsclubs/herschel/hers400.html>

RASC Observers

Group Notes

by Larry Scott,
"Interim" Observers Group Coordinator

Due to the Messier Marathon in March (see the "report" elsewhere in this publication) we did not have an Observer's Group scheduled, so not much to report. Please note the date change for the April Observer's Group from the 21st to the 28th. This was done to avoid conflict with the George Moores' Astronomy Workshop in Alberta. Conveniently, the date change also allows me to attend the Observer's Group so I will hopefully see many of you there.



Comet Pojmanski

Photo

by

Tenho Tuomi

The skies finally cleared enough to find comet Pojmanski, a month after its closest approach. Notice how much it moved in 20 minutes of picture taking in this 200-power picture taken March 28. I'm glad I saw it this time around for I understand it won't be back for 111,000 years.