

Saskatoon Skies

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December

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

2006



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O CHRISTMAS TREE ...

This holiday season, why not admire a Christmas tree of a different sort. NGC2264, is an open cluster of stars embedded in a diffuse nebula. It is located in the constellation of Monoceros, the Unicorn (06h 41min +09° 53')

This wide-field image of the Christmas Tree Cluster was taken at the National Science Foundation's 0.9-meter telescope on Kitt Peak with the NOAO Mosaic CCD camera. This image was created by combining emission-line images in Hydrogen-alpha (red-orange), Oxygen [O III] (light blue) and Sulfur [S II] (blue-violet)

Photo by T.A. Rector (NRAO/AUI/NSF and NOAO/AURA/NSF) and B.A. Wolpa (NOAO/AURA/NSF)

In This Issue:

Membership Information; Bottle Drive	2
U of S Observatory Hours; Light Pollution Abatement Website	2
Calendar of Events; Minutes of General Meeting	3
Minutes of Executive Meeting	3
Books For Sale; General Meeting Information	4
Sky Buys & Mirror Cells; Making a Charitable Donation	4
Activities Coordinator's Report	5
The Adventures of Thuban and Polaris in the Cypress Hills (Part 1)	5
The Planets This Month	8
The Messier, H-400 & H-400II, FNGC, Bino & EtU Club	9
RASC Raffle	9
Index to Volume 37 (2006)	10

Happy Holidays!

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 email her at ornjensen@scs.sk.ca.*

SASKATOON CENTRE'S MAIN OFFICERS:

President – Garry Stone, 857-4707

Secretary – Al Hartridge, 373-0034

Vice-President – Barb Wright, 249-1990

Treasurer – Norma Jensen, 244-7360



BOTTLE DRIVE & CANADIAN TIRE \$

by Darrell Chatfield

We have collected \$185.10 in Canadian Tire Money! If you cannot make it to a meeting but would like to contribute, your Canadian Tire money 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

Newsletter Editors – Tenho Tuomi, Ken Maher **Copy & Collate** – Les & Ellen Dickson **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

Dec 13-14	Geminid meteor shower	Rick Huziak	665-3392
Dec 15	Observers Group - 8:00 p.m., Sleaford Observatory	Larry Scott	934-5801
Dec 18	RASC General Meeting – <u>Potluck Social</u>, 6:30 p.m., 175 Physics, U of S.	Garry Stone	857-4707
Jan 12	Observers Group - 8:00 p.m., Sleaford Observatory	Larry Scott	934-5801
Jan 15	RASC Executive Meeting - 6:30 p.m., 175 Physics, U of S.	Garry Stone	857-4707
Jan 15	RASC General Meeting - 7:30 p.m., 165 Physics, U. of S	Garry Stone	857-4707
Feb 09	Observers Group - 8:00 p.m., Sleaford Observatory	Larry Scott	934-5801

MINUTES OF THE GENERAL MEETING NOVEMBER 20, 2006

by Ron Waldron

1. Meeting called to order at 7:45 p.m.
2. Approval of the minutes of October 16 General Meeting. Moved by Ron Waldron, seconded by Norma Jensen. Carried.
3. Events Report – Jeff Swick.
Hobby Show report given - \$300 in books sold and 10 books of raffle tickets. The next events will Messier Marathon in March and Astronomy Day in April of the New Year. Jeff Swick indicated that he is open to new ideas.
4. Fundraising Report – Darrell Chatfield.
There will not be any steak nights in the fall. \$108.00 in bottles was given to the treasurer. Raffle sales are continuing with approximately 40 books sold toward a target of \$300.00.
5. Newsletter deadline for December newsletter is November 27th.
6. Nominations for National Rep. Les Dickson nominated by Barb Wright. Nominations ceased. Les Dickson elected by acclamation.
7. Barb Wright announced to those present that December's meeting will be a Potluck event with a short General meeting if needed. Spouses and other family members are welcome. Les Dickson moved, Ron Waldron seconded. Carried.
8. Presentations.
 - a) Observing the Sun with Magnetometers by Tenho Tuomi.
 - b) Dakota Dunes update – Rick Huziak.
9. Meeting adjourned at 9:17 p.m.

MINUTES OF THE EXECUTIVE MEETING NOVEMBER 20, 2006

by Ron Waldron

1. Meeting called to order at 6:30 p.m.
2. Approval of minutes of the October executive meeting. Moved by Rick Huziak and seconded by Jim Young and carried.
3. Discussion regarding Board of Directors. Jim Gorkoff requested more time to look into the Sask. Financial Revenue Act and will report back at the December meeting. Should we decide that we need a board of directors, Jim further suggested we keep it as small as possible. Jim and Norma will also investigate our liability insurance.
4. Jeff Swick led a discussion of the value of setting up displays at the Hobby Show and the Malls for Astronomy Day. He feels that if we are not obtaining new members then is it really worth it? In future, he will convene these events but does not wish to work at them. Much discussion and many points of view followed including ways to attract new members.
5. Norma Jensen, Jim Gorkoff, Barb Wright and Darrell Chatfield will review our Centre's constitution and perhaps revise or rewrite them.
6. Barb Wright suggested that for our next meeting on December 18th that we have a Potluck Supper in lieu of an executive and general meeting. This idea was accepted by all present.
7. Bill Hydomako requested money to buy a power supply for the new 16" telescope (\$153.00) and a heating pad for the hand controller. Total cost estimate at \$250.00. Rick Huziak moved, Norma Jensen seconded. Carried.
8. A young person who lives near Sleaford has offered to clear the snow for us. Rick suggested we offer a membership for free in exchange for the snow removal. Rick or Bill will follow up on this.
9. Meeting adjourned at 7:30 p.m.



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	Books	Author	# Avail	Price
				Skyways – Astronomy Handbook for Teachers	M.L. Whitehorne	2	\$20.00
				Exploring the Sky by Day	T. Dickinson	2	\$9.50
				Exploring the Night Sky	T. Dickinson	2	\$9.50
				Night Watch	T. Dickinson	2	\$33.00
RASC 2007	RASC	11	\$14.00	Summer Stargazing	T. Dickinson	1	\$18.00
Night Watcher	S. Schadick	3	\$18.00	Night Sky Atlas	R. Scagell	3	\$27.00
				Stargazing with a Telescope	R. Scagell	2	\$14.00
RASC Centennial Mug		2	\$5.00	The Moon Observer's Guide	P. Grego	2	\$14.00
RASC Stickers, blue or white		lots	\$1.00	Stars	Zim, Baker & Chartrand	1	\$10.00
SSSP 2001 Pin (Summer Triangle)		29	\$2.00				
SSSP 2002 Pin (Comet)		17	\$2.00	Firefly Astronomy Dictionary	Firefly	3	\$14.00
SSSP 2006 Pin (10)		17	\$5.00	Pocket Sky Atlas	R. Sinnott	2	\$24.50
				Deep-Sky Wonders	W. Houston	2	\$24.50
The Backyard Astronomer's Guide	Dickinson & Dyer	2	\$45.00	Mars Observer's Guide	N. Bone	2	\$14.00
The Beginner's Observer's Guide	L. Enright	3	\$19.00	Deep Sky Observer's Guide	N. Bone	2	\$14.00
Observer's Handbook 2006	RASC	5	10.00	Practical Astronomy	S. Dunlop	2	\$14.00
Observer's Handbook 2005	RASC	1	5.00	Field Map of the Moon	Sky & Telescope	2	\$13.50
Isabelle Williamson Lunar Observing Program	RASC	8	\$10.00	Moon Map (laminated)	Sky & Telescope	5	\$6.50
				Saskatoon's Stone	W.K. Mysyk & C.L. Kulyk	5	\$3.00

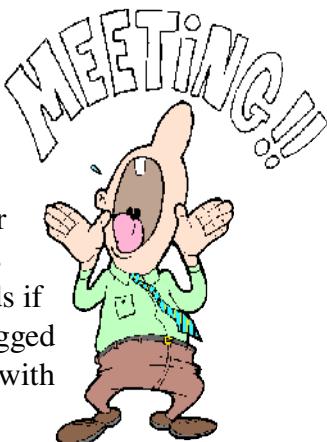
MONDAY, DECEMBER 18 6:30 PM

– ROOM 175, U OF S

POTLUCK CHRISTMAS SOCIAL

There will be no speakers or meeting, but bring your family and your favorite potluck dish for an evening of visiting and enjoying a meal. Everyone please come at 6:30 p.m. Coffee and apple cider will be provided, as well as paper plates and cutlery. There will be extension cords if you have a crockpot that needs to be plugged in. I have volunteers to help set up; help with clean up would be appreciated.

Note: There will be NO executive meeting this month



To Make a Charitable donation to RASC Saskatoon Centre

write a cheque out to RASC and place on the bottom that the donation is to the Saskatoon centre – a tax receipt will be issued in December of that year. Mail or give to the current treasurer

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.

Activities Coordinator Report

by Jeff Swick

Thanks to all came out and volunteered at the booth during the hobby show. I'm not sure what club won the ballot for best booth but I'd have to say the best display was Bruce Brandell with his display of astronomy books for sale. We also sold a few tickets on the quilt so good effort every body.

At the last executive meeting we had a brief discussion about our public outreach. As you know we also host two public star nights in the spring centering around Astronomy Day, generally a venue such as the Lakewood Civic Center on a Friday followed by a mall display on the Saturday with another star night at Beaver Creek. I'd like to solicit some different ideas from the members for group discussion on anything that might change things up a bit. The worst reason to do something is because "we've always done it" so if you have any ideas send them our way.

The next couple of club events will be the potluck supper at the next meeting (details elsewhere in the newsletter) and

there is also observer's group out at Sleaford centered around the new moon. Just check the calendar elsewhere in the issue. And speaking of Observer's Group a big group THANK YOU to Larry Scott for removing the interim from in front of the co-coordinators role. I'm going to miss kidding him about that. In seriousness however it is a very important role that he is fulfilling and in that role along with Bill Hydomako, the Sleaford site co-coordinator will often be more visible to the general membership as first contact regarding events and site conditions at the facility.

If you would like to assist either Larry or Bill or both feel free to contact them via email. The net worth of the organization is measured in direct proportion to the activities of its volunteers. You will only get out of it what you put into it.

Have a Happy Christmas every body and of course a STELLAR New Year

The Adventures of Thuban and Polaris in the Cypress Hills (Part 1)

by Alden Foraie, Miriam Martin & Nicole Dancey

Reprinted by permission from the Regina RASC newsletter, Stargazer – September/October 2006

In May of this year Norm Leier and I went to Cypress Hills to do a crash course in astronomy for the park interpreter staff. In August I returned to Cypress Hills for the annual SSSP. As Regina Centre hosts the public observing and the park interpreters would be working with us this was a great opportunity to see my 'students' in action.

The public observing is held in the tennis courts just down the road from the main star party at the Meadows. As dusk fell and we were getting our equipment set up the crowd grew rapidly. It looked like it was going to be a busy evening!! As it turned out Friday night could not have been better with incredible sky conditions.

The roles of 'tour guides of the stars' for the park interpreter staff was taken up my Miriam Martin a.k.a. Mimi and Nicole Dancey. In a word the work they have done over the summer developing a night sky program can only be described as AWESOME.

They each play the role of a star, with Mimi as Thuban and Nicole as Polaris. They must be seen in full costume to really be appreciated. I know where Polaris is and why it is a 'famous star' but I must confess at the time I had no idea where in the sky Thuban was or what this star's significance

was. As I was supposed to be these people's mentor I wasn't about to show my ignorance at the time. So for those others who don't know the history of Thuban it was once the North Star before Polaris took over this role (more on this later). An impressive bit of digging on Mimi's part and a great story and info to add to their public program!

The public observing went over great. Thuban and Polaris did a wonderful job showing off Cypress Hills' pristine night skies. Their costumes and enthusiasm drew a steady group to where they were set up with the park's new 20x80 binoculars and 10-inch dobsonian.

It was exciting to reflect on what had been happening in Cypress Hills over the past few years. This was the 10th anniversary of the SSSP. Since that first gathering of excited amateurs at this site some remarkable milestones have transpired. The SSSP is now one of Canada's premier astronomy events. A comet was discovered at one party. The location of Cypress Hills Inter-Provincial Park has been made into North America's largest dark sky preserve. As of 2006 the park added public observing of the summer night skies to the list of great nature activities for park visitors to enjoy.

Thuban and Polaris *continued ...*

It was a great feeling watching Mimi and Nicole do their new ‘thing’ as the last time I had seen them they were trying to aim the telescope at a street light down by the lake, as it was too cloudy to see a single star. Now here they were talking and showing off the skies like a couple of pros!! I knew from their excitement and work they put into this summer’s program that it should make for a good story. I asked Mimi and Nicole if they could share a few of their thoughts and details of how the park’s first summer of public observing went. Once again they surpassed my expectations and both sent me some great, from the heart, writing. It was too good to edit so here is their story in their own words ...

Mimi (Thuban):

Astronomy has always been on my list of things that I wanted to learn. But that list ended up somewhere in the bottom of my junk drawer. When Cypress Park was designated a Dark Sky Preserve in 2004, I looked at my boss, Melody Nagel-Hisey, and said, “I suppose I’m expected to learn astronomy now?” She nodded.

It wasn’t until 2006, though, after the park acquired a 10-inch telescope, that astronomy suddenly reared its starry head. This spring, I only knew four constellations – the Big and Little Dippers, Cassiopeia, and Orion. I knew what an aster was but not an asterism.

Thankfully, Norm and Alden from the RASC in Regina came out in May to give us a crash course in astronomy and, in particular, how to use the park’s new telescope.

The telescope baffled me initially. I’m rather slow technically and need to do something repeatedly to get it into my head. It took awhile but when summer ended I felt comfortable around the telescope. Technicalities aside, in May, I wasn’t too concerned about the rest of it. I’ve been an interpreter for 20 years; I’ve had to learn everything about these Hills – geology, flora and fauna, cultural history, and so on. How hard could learning some constellations be? WELL!

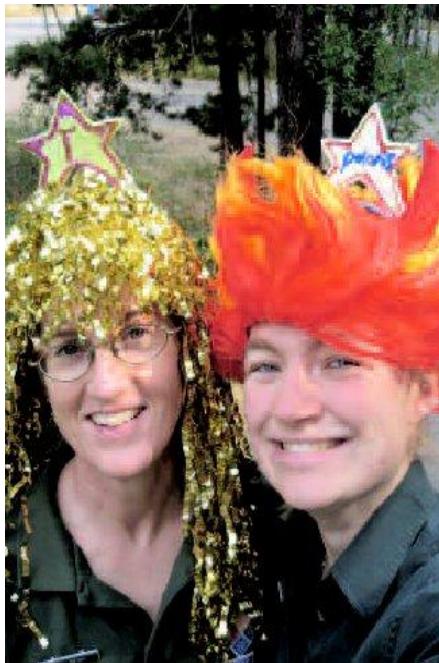
I bought a couple of books and was blown away when I first started to read up on the stars. Most of what I had been taught in school had evaporated a long time ago. Words like nebula and globular clusters were not in my vocabulary. Luckily, my co-worker Nicole, a very brave and confident girl, decided she would do astronomy for three of the June public programs. (N.B. Most of our interpretation in the spring is directed towards school groups but we do Saturday public

programming in June). Anyway, Nicole realized long before me that she knew nothing and spent a lot of her own time putting some information together so she would know something for these programs. When July rolled around and we were faced with doing our first big program together, I was really unprepared. How little I knew embarrassed me and so I spent lots of evenings at home looking up at the sky while everyone else was in bed. I also put aside all other reading material and read astronomy books.

Our public program for the summer was conducted at Lookout Point. In July, it doesn’t get dark until after 11 pm. Our program started at 10 p.m. While the sky darkened, we

talked about the importance of Dark Sky Preserves and CHIPP’s designation as such, light pollution and how to combat it, the history of telescopes, how the rods and cones in our eyes work, the 88 constellations and their designation, expected behavior around the equipment. We also handed out sky charts and red cellophane for flashlights and explained how to use the sky charts.

Initially, we focused on Jupiter and the double star in the Big Dipper. Our numbers of people per program from May to September are 17, 17, 6, 27, 93, 38, 43, and 19 =260. The program with 93 people was overwhelming. The line-ups were so long we only managed to show them two things. After every program, once the public left, Nicole and I stayed out to find other things. When I found the M13 cluster for the first time we whooped and hollered and high-fived. It was so exciting!



*Photo reprinted from StarGazer,
Sept/Oct 2006*

We did not do astronomy every week. We worked it into the weeks where the moon was not too much of a factor and around all our other programs. We were blessed with clear skies almost every night (drought factor) and only had to deal with smoke haze and the occasional cloud. Next year we will do it once a week and learn to use the other eye pieces and moon filter. People loved looking at the moon and seeing the satellites around Jupiter. We love to hear all the ooh’s and aah’s coming from people as they see something for the first time.

As the summer progressed our program evolved. It became darker sooner and it was quite interesting doing a program in which all the participants are not seen only heard. We put together a skit-like introduction, too, which set the tone of the program. Here it is.

(We wear headbands with glow-in-the-dark stars on them)

Nicole – Welcome to the Land of Living Skies!!! (very dramatic of course... as I tend to be)

M – Saskatchewan skies are alive not just during the day but at night, as well. Alive with nebulas and galaxies. Shining with Red Giants and white dwarfs. Twinkling with heroes and monsters, queens and kings. And teeming with animals – like the two bears and the dogs that are chasing them; a beautiful swan, an elegant dolphin, a gigantic snake and even a lynx and a hare. Some of the stories of how they came to be in the heavens are still with us; others have been lost in the mists of time. But remembered or forgotten, clearly visible or only imagined, we are in the best place in North America to take it all in.

Nicole – Oh and why is that?

Mimi – Because you are now in the largest Dark Sky Preserve in North America. Which reminds me of a saying: The skies are painted with unnumbered sparks. They are all fire, and every one doth shine.

Nicole – Wow, that's profound. Did you come up with that?

Mimi – Nope. My friend Will Shakespeare did.

Both – [point red flashlights in our face]. Hello. I am Polaris (Nic). And I am Thuban (Mimi).

Polaris – We are stars!!! (Big dramatic bow)

Thuban – Hold on Polaris. We are just two of the thousand billion stars that are in our home galaxy, The Milky Way. I won't even go into the tens of billions of other galaxies that each holds billions of other stars. Remember that, Polaris. Just because the constellations in this galaxy move around you now does not make you the centre of the universe. In fact, I don't really think there is a centre.

Polaris – You're only jealous because 4000 years ago the constellations used to revolve around you.

Thuban – In fact, the Egyptians oriented their temples to me.

Polaris – But no longer.

Thuban – I cannot help that the Earth's axis and by extension, the celestial poles, shifts position over time. Once I was the polestar but now it is you.

Polaris – (Big voice) YES, I am the North Star!!!

Thuban – Whatever!!

Hi, I'm Nicole/Mimi. (and on we go with the program)

We really enjoyed the programs later in the summer because it became darker sooner so we did more in-depth constellation tours using the awe-inspiring, audience-wow, coolest-tool-on-earth LASER pointer. People really enjoyed these tours, lying on their blankets around us and taking a magical mystery tour to learn all about Perseus and Andromeda, Hercules and Aquila, Cygnus, Bootes etc. We showed them how to land mark using their sky charts and the Big Dipper to find Polaris (and Thuban), Arcturus and a few other common stars and constellations. We received great reviews for our astronomy program. After the last one in September, I talked to a couple the following day who had come to it. It was their first time in the Cypress Hills and their first time looking through a telescope. They told me they plan to come back to the park next year and come to our astronomy program.

Nicole and I waited impatiently for the SSSP to begin. On Thursday of their arrival, we and the CHIPP, Alberta interpreters prowled around in the dark Meadows campground and poked our eyeballs at many different telescopes and saw so many more things. I want to thank Vance and all the astronomers (faceless and nameless though most of you are in the dark) for your patience and generosity for showing us the skies that night.

Friday night, Nic and I completed our last campfire program of the season. (A no fire campfire due to the fire ban.) Nicole was dressed as the fire with a flame wig and yellow coveralls. I donned a glittery gold wig. The theme of the campfire was the Dark Skies so we also put on our Polaris and Thuban headbands.

Dressed as such, we showed up at the Tennis Courts to assist the SSP with the public viewing night. The public viewing was busy and fun and from there we went to Meadows to the "Regina Corner" to stare through the telescopes of Alden Foraie, Norm Leier, Kevin Gallant and Paul Meyer. They showed us so many more things and we thank them for the fantastic education.

The astronomy program has become my favorite. It is an enormous amount of work – there is so much to learn – but that is one of its charms. It provides people with a view of the skies that many never get and brings to many their first awareness of light pollution. The Cypress Hills skies are pristine and I know how lucky I am to work here and live nearby. I can't go out at night anymore without looking up and feeling thrilled that I now know more than four constellations. What's the best thing about learning astronomy this summer? I now have my own awe-inspiring, audience-wow, coolest-tool-on-earth LASER purchased at the SSSP to help me teach my 10 year old daughter the night sky. Does this make me a star geek? If so, I'm proud of it.

Next month -- Part 2, Nicole's Thoughts: (Polaris)

The Planets This Month, December 2006

by Murray D. Paulson, Edmonton Centre

Last month, the transit of Mercury posed some serious challenges. I had thought of heading to Calgary to see the event, but at the last minute the Environment Canada's weather information convinced me that the clearing would be coming out of the northwest. As it happened, the sky was clear in the morning in southern Alberta, but clouded up at 2 pm and became fully overcast before the storm by 2:30 pm.

This was the condition at Rothney Observatory. They had a good first contact and got the first half of the transit before the curtain call. If I had been there, the following snowstorm would have kept me in southern Alberta till the next day. As it turned out, the weather here sucked! Yes, anywhere but Edmonton... I watched the weather maps and saw the clearing bubbles coming down from the north over the Swan hills. As I missed first contact I called Alister to get his advice and it still looked like we might get something if we sat tight. I waited for the 1:00 pm update on the Environment Canada site weather movie. That was the one that showed that the southerly flow from northern Alberta was running into a flow out of BC coming from the Jasper area and it was turning the clearing bubbles south east motion to an easterly motion.

Dang! The clearings were going to skirt the Edmonton area entirely. I finally made the call and headed north just after 2 and found clearings near Clive corner on the highway to Athabasca. I stopped on a side road about 5 km north of Clive and watched an hour of the transit with the sun flirting with the ever-present band of cloud on the horizon. It was quite the visage to see that tiny black hole in the midst of the sun. Much smaller than that of Venus back in 2004, but it was such a crisp black dot, and much blacker than the lovely pairing of sunspots near the sun's limb. Occasionally a band of cloud would cross the sun creating a visage strikingly similar to a shadow transit on Jupiter. Cool! The sun slowly sunk into the band of cloud and faded away. Well, I finally got to see a Mercury transit after many years of trying. Now I can relax and wait for 2016.

A month after the transit, **Mercury** vaults its way into the morning sky and provides a great morning apparition. By early December, Mercury has already culminated in its greatest eastern elongation and is now headed back toward the sun. It still is shining at magnitude -0.5 and a telescope will show you its 5.5" gibbous disk in the hour before sunrise. On Dec 10th, we have a close conjunction of Mercury Mars and Jupiter. The three planets will be closer than 3 degrees apart from Friday the 8th to Tuesday the 12th. On December 10th, the grouping will be especially tight with the three planets



Photo supplied by M. Paulson

occupying less than 1 degree of space. The grouping rises at 7:20 am with Mercury only 10 minutes of arc above Jupiter. Mars sits 1 degree to the right of Jupiter and Mercury. Mars is the dim red speck at magnitude 1.5 with Mercury at magnitude -0.6 and Jupiter shining at Magnitude -1.7. A medium power telescope field is the way to see this one, so mark it on your calendar.

Have you seen **Venus** yet? By early December Venus shines at magnitude -3.9 and sets ½ hour after the sun. You will need a really good southwest horizon to hunt for it. It should be more prominent by Christmas, and will make a pretty evening star before it sets just after 5 pm. Venus is sitting 1 degree below the ecliptic which makes its southern excursion into Sagittarius even worse for us at these high latitudes. Give it a shot over the holidays. One note is that the Moon and Venus are

4.3° apart, Sep=+04°18'34", Alt=-24°, 72% Dark

Mars sticks close to the sun for the second month in a row sitting in Scorpio. It will not be striking in the morning sky even when it climbs out of the twilight glare in the late part of the month. Its brightness still sits at 0.5 magnitude and in the eyepiece Mars shows a disk of 3.8". We have another year before the next good apparition, so watch it as it comes back.

Jupiter was in a favorable planetary conjunction at the beginning of December, which I have detailed in the section on Mercury. By the months end Jupiter will be a prominent morning star as you head off to work, or out for your weekend morning walk. It rises 2 hours before the sun and shines at magnitude -1.8. In the eyepiece, you will see its familiar 32" oblate disk.

Saturn will stay in the sickle of Leo over the next month and sit almost stationary. It shines at magnitude 0.3 and at the beginning of the month, it rises just before 10 pm. By the end of the month Saturn rises around 8 pm and becomes a fine object for your testing of those new Naglers that Santa left under the tree. In the eyepiece you will see the 19.4" disk with a rather shallow ring plane. Despite the shallowness of the plane of the rings, and the orbital plane of Saturn's moons, watch to see how high the moons pass over Saturn. It is surprising how far Iapetus and Titan sit above the planet. On December 10th at 05:26 am the Moon and Saturn are only 35' apart. In one lunar month's time we get a repeat, but the best is to be seen on the other side of the planet. When the moon rises on January 7th, Saturn is 4 degrees to the right of it.

Well, the best to you over the holiday season. May you raise a glass over the season, and point it skyward!

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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>



Many hours of hand work went into the making of this very fine looking quilt. Most of the work on the star was done on a treadle machine, for those of you who know about quilting. The side of this quilt is 85" x 101", which is large enough to fit a queen size bed! (value \$2500)

RASC RAFFLE

(Lic. # L06-0213)

by Darrell Chatfield

The RASC RAFFLE is now on, I will have ticket booklets at all the meetings from now until April/07. The other two prizes are a Viewsonic 19" flat screen monitor, and a Weitzel scratch art "Owl" print. The raffle is to raise money to house our new 16" Meade scope. Pick up your books of tickets today!

Ticket prices are: \$2.00 each, or three for \$5.00.

Draw Date: April 21, 2007 at Saskatoon, SK.

See our web page for more information:

<http://www.usask.ca/psychology/sarty/rasc/raffle.html>

Saskatoon Skies – Index to Volume 37 (2006)

Articles are grouped by subject and are listed according to the page and issue in which they appear

Club Activities and Announcements

Editor's Corner	10 Jan
Annual Secretary's Report for the Saskatoon Centre	4 Feb
Saskatoon Centre Financial Statement for 2005	5 Mar
Changes in the Journal Delivery to Members	7 Mar
2006 General Assembly, Ottawa	8 Mar
How the Sleaford Observatory Works	9 Apr
Proposed 26 inch Telescope Project!!!	9 Jun
Centre Purchases 16" Telescope	3 Sep
Annual Elections – A Primer	9 Sep
A Moving Story	9 Sep
October General Meeting Report	5 Nov

Contests & Certificates

Saskatoon Centre Does it Again	9 Jan
M83 – the last of my Messier List	7 Feb
Messier Marathon 2006	5 Apr
The Messier Marathon – Air Canada Style	5 Apr
Messier Marathon at Lucky Lake	6 Apr
Helping Hand at the Messier Marathon	7 Apr

Cover Page

Mars, by Murray Paulson	Jan
Saturn next to M44	Feb
Saskatoon's Fifteenth Messier Certificate Coming Up	Mar
Messier Marathon 2006	Apr
Saskatoon at the George Moores' Astronomy Workshop	May
Toddler Memberships?	Jun
Changing Shape of Venus	Aug
10 th year of Saskatchewan Summer Star Party	Sep
Waiting for the Sky to get Dark at Sleaford	Oct
First Sight for the Club's New 16" Scope	Nov
O Christmas Tree	Dec

Light Pollution Abatement

Letter from Cypress Hills International Park	5 Mar
Saskatoon LPA Victory!	4 May
Dark Sky Preserves:	
The Message is Getting Out There	5 Aug

Miscellaneous

A Christmas Telescope	5 Jan
A View of our Galaxy from CDs and NGC Objects	7 Jan
Astronomy Information for Girl Guides	5 Feb
A New Star, Which May be Yours	8 Apr
Ask AstroNut	8 Apr
Ask AstroNut	8 Aug
Mars as Large as the Full Moon	9 Aug
Recipes from the Saskatchewan Summer Star Party	8 Sep
Precession, Aztecs, and the End of the World	6 Nov

Observing Notes

Markarian's Chain through Celestron's 114ED Shorty	6 Jan
Variable Star Results – We're Number Two!	6 Jan
Flyby of Venus	8 Feb
Of Sucky Skies and (530) Turandot	6 Mar
Saturn this Season	7 Mar
Comet Pojmanski	10 Apr
Lunar Observing and the Full Moon	9 May
Comet 73P/Schwassmann-Wachmann	
Passes the Ring Nebula	10 Jun
The Planets at SSSP 2006	3 Aug
July at Sleaford	7 Aug
Jupiter and Ganymede	10 Aug
Venus at SSSP 2006	7 Sep
Astrophotography Explosion	5 Oct
October at the Tuomi Observatory	7 Nov
Mercury Transit from Southern California	8 Nov

Public Star Nights

Adventures in the Dark	6 Jun
Astronomy and the Native Plant Society	6 Aug
Sleaford Open House	5 Oct
The Adventures of Thuban and Polaris	
in the Cypress Hills (Part 1)	5 Dec

Product Reviews

Book: The Night Sky Observer's Guide	4 Jan
Book: The Catalogue of Discordant Redshift Associations	8 Jan
Book: Atlas of the Moon	5 Feb
Book: North Spirit: Travels among the Cree and Ojibway Nations and their Maps	8 Feb
Book: Saskatoon's Stone	7 Sep
Book: A User's Guide to Saskatchewan Parks	10 Sep

Saskatchewan Summer Star Party & Others

George Moores' Astronomy Workshop	6 Feb
Saskatchewan Summer star Party	6 Mar
Saskatchewan Summer star Party	7 Apr
Report from George Moores' Astronomy Workshop	6 May
Saskatchewan Summer star Party	10 May
Saskatchewan Summer star Party	7 Jun
Northern Prairie Starfest / Space Exploration Symposium	7 Jun
Saskatchewan Summer star Party	7 Aug
The 10 th Saskatchewan Summer Star Party	5 Sep
SSSP '06 – The Magic Continues	6 Sep
Combination Saskatchewan Summer Star Party & General assembly	9 Oct

Telescope Notes

Making of a New Telescope	5 May
Recipe for \$5 Cheshire Collimator	8 Nov