

# Saskatoon Skies

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

Vol. 38  
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2007



## Aurora of December 14, 2006

According to SpaceWeather.com, Sunspot 930 produced some of the strongest flares of the past 25 years, and Northern lights were seen as far south as Arizona.

*Photo by Tenho Tuomi*



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**LIGHT IT UP!**

# 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 njensen@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

Thanks to everyone we have collected \$188.75 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

<b>Mar 16 &amp; 17</b>	<b>Messier Marathon - Dusk, Sleaford Observatory</b>	Larry Scott	934-5801
<b>Mar 19</b>	<b>RASC Executive Meeting - 6:30 p.m., 175 Physics, U of S.</b>	Garry Stone	857-4707
<b>Mar 19</b>	<b>RASC General Meeting - 7:30 p.m., 175 Physics, U. of S</b>	Garry Stone	857-4707
<b>Apr 13</b>	<b>Observers Group - 8:00 p.m., Sleaford Observatory</b>	Larry Scott	934-5801
<b>Apr 16</b>	<b>RASC Executive Meeting – 6:30 p.m., 175 Physics, U of S.</b>	Garry Stone	857-4707
<b>Apr 16</b>	<b>RASC General Meeting – 7:30 p.m., 175 Physics, U of S.</b>	Garry Stone	857-4707
<b>Apr 21</b>	<b>International Astronomy Day &amp; RASC RAFFLE</b>	Jeff Swick	373-3902
<b>May 11</b>	<b>Observers Group - 9:00 p.m., Sleaford Observatory</b>	Larry Scott	934-5801
<b>May 14</b>	<b>RASC Executive Meeting – 6:30 p.m., 175 Physics, U of S.</b>	Garry Stone	857-4707
<b>May 14</b>	<b>RASC General Meeting – 7:30 p.m., 175 Physics, U of S.</b>	Garry Stone	857-4707
<b>Jun 11</b>	<b>RASC Executive Meeting – 6:30 p.m., 175 Physics, U of S.</b>	Garry Stone	857-4707
<b>Jun 11</b>	<b>RASC General Meeting – 7:30 p.m., 175 Physics, U of S.</b>	Garry Stone	857-4707
<b>Jun 28 – Jul 1 RASC General Assembly (Calgary)</b>			



## 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](mailto:bruce_brandell@yahoo.com)

<b>Title</b>	<b>Author</b>	<b>#Avail</b>	<b>Price</b>	<b>Title</b>	<b>Author</b>	<b>#Avail</b>	<b>Price</b>
<b>Books</b>							
RASC 2007	RASC	6	\$14.00	Exploring the Sky by Day	T. Dickinson	2	\$9.50
Skywatcher's 07	S. Schadick	6	\$18.00	Exploring the Night Sky	T. Dickinson	2	\$9.50
Skywatcher's 06	S. Schadick	1	\$5.00	Night Watch	T. Dickinson	2	\$33.00
<b>Miscellaneous</b>				Summer Stargazing	T. Dickinson	1	\$18.00
RASC Centennial Mug		2	\$5.00	Night Sky Atlas	R. Scagell	3	\$27.00
RASC Stickers, blue or white		lots	\$1.00	Stargazing with a Telescope	R. Scagell	2	\$14.00
SSSP 2001 Pin (Summer Triangle)		29	\$2.00	The Moon Observer's Guide	P. Grego	2	\$14.00
SSSP 2002 Pin (Comet)		17	\$2.00	Stars	Zim, Baker & Chartrand	1	\$10.00
SSSP 2006 Pin (10)		17	\$5.00	Summer Stargazing	T. Dickinson	1	\$18.00
<b>Books</b>				Night Sky Atlas	R. Scagell	3	\$27.00
The Backyard Astronomer's Guide	Dickinson & Dyer	2	\$45.00	Exploring the Night Sky	T. Dickinson	2	\$9.50
The Beginner's Observer's Guide	L. Enright	2	\$19.00	Exploring the Sky by Day	T. Dickinson	2	\$9.50
Observer's Handbook 2006	RASC	5	10.00	Exploring the Moon	T. Dickinson	2	\$9.50
Observer's Handbook 2005	RASC	1	5.00	Field Map of the Moon	S. Dunlop	2	\$14.00
Isabelle Williamson Lunar Observing Program	RASC	8	\$10.00	Mars Observer's Guide	N. Bone	2	\$14.00
Skyways – Astronomy Handbook for Teachers	M.L. Whitehorne	2	\$20.00	Practical Astronomy	N. Bone	2	\$14.00
				Deep-Sky Wonders	W. Houston	2	\$24.50
				Mars Observer's Guide	N. Bone	2	\$14.00
				Deep Sky Observer's Guide	N. Bone	2	\$14.00
				Field Map of the Moon	S. Dunlop	2	\$14.00
				Moon Map (laminated)	Sky & Telescope	1	\$12.50
				Messier Card	Sky & Telescope	4	\$6.00
				Saskatoon's Stone	Sky & Telescope	7	\$5.00
					W.K. Mysyk & C.L. Kulyk	4	\$3.00

# **MONDAY, March 19 7:30 PM ROOM 175, U OF S**

**Video** by Rick Huziak: The Cypress Hills Dark-Sky Preserve - SCN-TV. This video is a 13-minute long program done by SCN television in a series covering activities around Saskatchewan. It was shot at the 2006 Saskatchewan Summer Star Party.

## **Review of the Advanced Imaging Conference at San Jose, by Al Hartridge**

*Note: There will be an executive meeting at 6:30 p.m. in room 175.*



## **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.

## **Minutes of the Executive Meeting Feb. 12, 2007 by Al Hartridge**

1. Meeting called to order at 6:30 p.m.
- 2 Minutes of the previous meeting approved. Moved by Jim Young, seconded by Les Dickson and carried.
3. Treasurer's Financial Statement 2006: the figures were presented by Norma Jensen. She mentioned that the cost of the newsletter has increased. A motion to accept the financial report was made Barb Wright, seconded by Jim Young and carried.
4. Centre Directors: Tenho Tuomi, Rick Huziak, Ron Waldron, Les Dickson and Norma Jensen have been appointed as directors of the Saskatoon Centre.
5. Sleaford: Ron Waldron would like to arrange for snow removal at Sleaford before there is significant melting to help avoid a quagmire at the site.
6. Astronomy Day: Jeff Swick would like to change the site of the display to the farmers' market from a Mall display. He would like to continue with the Friday night public star night at the Lakewood Civic Center.
7. Meeting Adjourned at 7:10 p.m.

## **Minutes of the General Meeting February 12, 2007**

**by Al Hartridge**

1. Meeting called to order at 7:30 p.m.
2. Minutes of the Jan.15 meeting accepted. Moved by Les Dickson, seconded by Brent Burlingham and carried.
3. Star Party Volunteers: a volunteer coordinator is needed for the star party to get names in place.
4. RASC GA/Ar 2007 display competition: members are encouraged to attend the up coming GA in Calgary. Calgary has been a strong supporter of our SSSP. We should try to put together a display for this event.
5. Events Committee: Jeff Swick suggested that this year we try to hold the astronomy day display at the farmers' market. He would also like to continue the public star night at the Lakewood Civic center on the Friday night.
6. Fundraising: Barb Wright mentioned that the half-way point with ticket sales for the raffle has been reached. She will mail tickets to some members. Darrell is getting an application together to send to the Kalium mine.
7. Membership: Mike Clancy mentioned that there are 83 paid up members as of this date.
8. Newsletter: Tenho said there was a good response last month with articles for the newsletter. He also talked about the need to acquire permission from people to publish their photograph in the newsletter.
9. Change of meeting dates: the meeting in May will be held on the 14th and in June on the 11th. A motion was made by Rick Huziak, seconded by Jim Young and carried that we accept these altered meeting dates.
10. Presentation of Certificate: An Explore the Universe certificate was presented to Ken Maher for his observations.
11. National Journal: national office has copies of old journals that they wish to discard. Garry Stone will try to acquire some of these so they could be available to members.
12. Laser Pointer: will be kept in one of the lockers at Sleaford that can be accessed with a Site Key.
13. Presentation: The Aurora Borealis- Jean-Pierre St. Maurice, Canada Research Chair, U. of S. Institute of Space and Atmospheric Sciences.
14. Meeting adjourned at 10:00 p.m.

# Saskatoon Centre Financial Statement for 2006

Operating Statement for the Fiscal Year Ended  
September 2006

Fundraising	<u>1048.12</u>	<u>-</u>
Total Expenses	16868.56	15282.15
Net Surplus (Deficit)	3860.29	1213.96

Revenue	2005-06	2004-05
Membership Fees	2542.25	1953.07
Public Education	-	434.36
Retail Sales	1335.50	1055.84
Donations	370.60	16.00
Star Party	14,016.61	10,488.55
Dinners, Raffles	1922.67	2322.77
Interest	<u>541.22</u>	<u>225.55</u>
Total Revenue	20,728.85	16496.11
Expenses	2005-06	2004-05
Public Education	341.38	644.29
Taxes and Licenses	10.00	10.00
Star Party	11,275.31	9914.27
Utilities	580.01	554.21
Insurance	766.00	632.00
Repairs and Maintenance	165.15	1316.20
Office Supplies, Newsletter	901.81	226.59
Retail Sales	575.01	1226.76
Depreciation	816.96	511.59
Miscellaneous	388.81	246.24

## Statement of Assets and Liabilities at September 30, 2006

Assets	2005-06	2004-05
Cash	5130.62	7799.34
Term Deposits	15687.75	15207.96
Raffle Fund	28.75	311.24
Buildings, Equipment	15522.31	9839.27
Retail Inventory	870.75	150.00
Total assets	37240.18	33307.81
Liabilities	2005-06	2004-05
Prepaid Membership	72.08	-
Surplus (Deficit)		
Balance forward	33307.81	
Current Year Surplus (Deficit)	3860.29	
Balance end of Year	37168.10	
Total Liabilities and Surplus	37240.18	33307.81

## Aurora of December 14, 2006



Picture by Tenho Tuomi

We are at a sunspot minimum and should not expect much aurora activity, but we still



Picture by Garry Stone

had a good show on the evening of December 14.

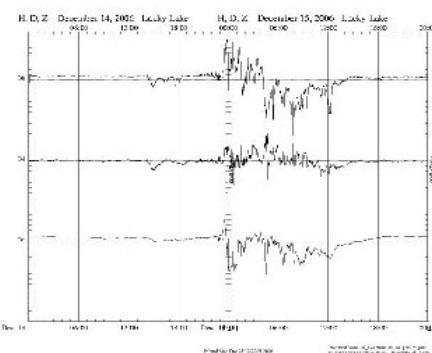
Jeff Swick first made an announcement on the Saskatoon list on December 13 that a major flare has been seen on the sun. Garry Stone saw the aurora before 7 p.m. on December 14 when he and Myrna were out for a walk. He said it started as a low band in the South, which is unusual, and then quickly swept to the north. I did not see the aurora until 7:15 when I started taking pictures of it, as waves of bright aurora swept from East to

by Tenho Tuomi

West and lit up the yard like a full moon.

From our general meeting on February 12th with Jean-Pierre St. Maurice, I learned that what I had witnessed was an aurora sub-storm. Garry saw another

flare-up after 10 p.m. and took more pictures. Many pictures of the aurora appeared on the Internet in the next few days. Ellen Dickson emailed me, "Did anyone else catch the incredible aurora tonight between 1915 - 1945 hrs? Les tells me that the crew on board the space station were talking about them trying to find radiation hard spots on the space station and shuttle to sleep, far away from the radiation, from the solar outburst."



Picture of the magnetic activity for Dec 14 as seen on my magnetometer via the University of Tokyo website.

# Is Star Hopping a Lost Art in 2007 ?

by Scott Alexander

I was just looking through the latest edition of SkyNews and saw a article on the "SkyScout" personal planetarium a hand held planetarium devise by Celestron. My first thought was, have people lost the ability to read and starhop themselves or do we have to have computers do everything for us. What is the point of astronomy to use your brain to learn something, or to be a computer jockey and punch buttons.

At 500 dollars you could buy a full set of the best sky atlases made for that price (Uranometria 2000, millennium star atlas) or some of the other star atlases that are out there. Does everything have to have a GPS on it these days if you (the human being) do not know where you are on this planet. What good does a GPS do you if you want to take pictures through the scope. That is what the motor drive is for and with ppec (permanent periodic error correction) the drive should keep you all lined up with what you are looking and taking pics of without the GPS unit.

## Scope after-light

by Kathleen Houston

There has got to be an easier way to upgrade!

A fire snuck into my garage I share with my neighbour on January 4th, 9 p.m., and changed my life. My scopes' after-light will be transformed into either an 8" Antares or 10" Lightbridge. Rick thinks the caption should be: Look what happens when you observe the sun too long! Ironically I never used my sun filter I made for the Venus transit.

I enjoyed my Meade 6" dob for 7 years, not long after moving out west from Montreal to Prince Albert. In the spring of 2001 I was expecting Marael, and was delighted when my first scope arrived and was assembling it in spite of my huge tummy. Though I found out later one of the bearings was for an 8" and needed to be shimmed, (6" was discontinued and the part not replaceable), I thoroughly enjoyed my newfound connection to the sky. I and my Starfinder did star parties, Sleaford for the first time, Astro day and tons of gravel observing when I was living in Prince Albert. Last summer I upgraded at SSSP with three Vixen eyepieces and revolutionized my seeing in spite of my astigmatism. I moved to Saskatoon in January 2006 and only went to Sleaford a handful of times. My first post fire observing at Sleaford was on January 8th, when Rick took out his students for a session. I borrowed Etook and had a terrific time!



Picture by Rick Huziak

it yourself. Finding it yourself is the way that you learn anything in life. I hope the beginners and the experienced astronomers out there will put the computers down and go and experience the hobby the fun way and learn something in the process because isn't that the way we all got into this hobby in the first place.

Clear skies!

# A Tale of Three Craters: Lunar Observing

by Mike Clancy

Located in the lower right quadrant of the moon, just below the Sinus Aspertitatis (the Bay of Asperity; it connects Mare Tranquillitatis and the lower Mare Nectaris) and beside Mare Nectaris (The Sea of Nectar) you will find the very interesting trio of craters called Theophilus, Cyrillus and Catharina. For those of you with Rukl charts, the craters are found on chart 46 and 57. The interesting thing about these three is that they summarize the aging face of the moon for all to see. In this picture, from top to bottom, you'll see Theophilus, Cyrillus and Catharina with Cyrillus shaded in pink to differentiate. All three craters are about 110 km in diameter yet they have distinctly different crater wall morphology; why?

You can see that Theophilus must be younger than Cyrillus as Theo's crater overlaps Cyrillus'. Looking at the central peaks one sees that Theophilus peak, rising about 2.2 km above a crater floor relatively free of impact craters, is taller and more distinct than that of Cyrillus. In fact, Cyrillus' crater floor has been partially filled by the ejecta from the Theophilus impact which reduces the height of his peak from the crater floor. But what of Catharina?

Looking closely at the two lower craters, one clearly sees that Catharina has been battered more often than Cyrillus, in fact her central mountain or peak has been completely obliterated as has her northern crater wall, all by meteor or asteroid impacts.

Lastly, look closely at the crater wall morphology; again a clear progression is seen with the topmost being far more intricate and sharply defined than the middle one which is itself more clearly defined than the lower. This erosion is due to further meteor impacts and if one



reasonably assumes an even distribution of impacts geographically then an area with greater impact craters must therefore be older, time being the only changing variable.

Therefore we can establish an age sequence for these three features: Theophilus is youngest followed by Cyrillus and the eldest being Catharina. What are their actual ages? That is a much less precise estimation; Charles A. Wood in his "Exploring the Moon" estimates that Cyrillus and Catharina are about 3.84 - 3.92 billion years old while young Theophilus is only 1.5 - 2 billion years old; none of these are more than reliable surmise however.

I began observing these features as part of my "Beginners Observing Certificate" program and even took the liberty of making some crude drawings of them as seen through the eyepiece of my trusty 114EQ Newtonian. The picture seen here is substantially clearer, and was downloaded from the following URL: [www.rccr.cremona.it/monografie/luna/idkt157.htm](http://www.rccr.cremona.it/monografie/luna/idkt157.htm)

Although the site is written in Italian it can be searched by crater name and the photos are quite nice; give it a look the next time you're researching your lunar observing sessions.

## 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:** 12 Orion Skyquest Intellescope with object locator. Regular \$1400.00, first \$900.00 takes it, never used. Bob Johnson <[bjohnson53@shaw.ca](mailto:bjohnson53@shaw.ca)>

# Observer's Group Notes

by Larry Scott

As per my devious plan the Observers Group on Feb. 9th was clouded out. Norma, Ron and I were able to grab a few hazy views of Saturn at opposition until about 22:00. Then the clouds rolled in and we were done. Luckily there was lots of snow to shovel again so we didn't have a chance to get bored.

Next trip to Sleaford is March 9th (which is before this newsletter comes out) and will be a warm-up for the Messier Marathon the following weekend. I'd like to have everyone out for March 17th but we should be

ready to go on the 16th as well due to the weather permitting clause. Keep an eye on our yahoo! site for updates.

There will be Messier lists at Sleaford available for anyone wanting to participate in the Marathon. Even if you're not interested in the Marathon this is a great event to attend as there are generally lots of people and scopes.

See you out there.

## A Serious Discussion Group for Light Pollution Issues

by Richard Huziak

If you are interested in light pollution abatement (LPA), or in simpler terms, keeping others' lights out of your sky, there is a new Internet discussion group you might be interested in.

At the 2006 SSSP, we had an excellent gathering of Light Pollution Abatement Committee members from no less than 5 RASC Centres and 1 non-RASC astronomy club. With this population of knowledgeable LPA people (in particular, Kim Hay & Kevin Kell (Kingston Centre), Scott Young (National President and Winnipeg Centre), Roland Dechesne (Calgary Centre), Bruce McCurdy (Edmonton Centre), Rena Mulhanney (nee: Woss, Lethbridge Astronomy Society), Vance Petriew and Darcy Kozoriz (Regina Centre) and me (Saskatoon Centre) we had the makings of an intense, impromptu discussion of what we really needed nationally to aid in the Canada-wide LPA fight. What came out of our discussion, among other things, was the need for a National LPA Discussion Group, separate from the RASCList, and a few weeks later, with the help of National web-site resources, Scott Young had this organized.

This group discusses local, provincial and federal LPA issues and we provide information to each other that may aid our collective fights and research. The group was designed to have open communication and to provide resources that have already been developed by other groups to prevent duplication of effort, and worse yet, contradiction of statements and goals.

This group was set up as a "working group" where group members are actively pursuing change with local,

provincial or national governments or businesses. As such, this is not a general discussion group such as the RASCList where everything goes. We strongly discourage chit-chat on the group, since most participants are very busy pursing projects and need information and direction from e-mails, as opposed to the no value "Yep - I agree" or "Sounds like a plan" comments that are often seen on chat-type groups. However, we really encourage updates to how LPA fights are going, new information that comes available, and alerts to LPA issues across Canada. If you are willing to help out within these terms and want to make a contribution, or are just interested in LPA updates, then by all means, subscribe to this group. We always welcome new contributing members.

To join the National LPA Discussion Group, follow directions at:

<http://crux.stmarys.ca/mm21/listinfo/lpa>

The RASC's National LPA website is located here:

<http://www.rasc.ca/lpa/index.shtml>

Note that the Saskatoon and Regina Centres maintain a separate discussion group of the Saskatchewan Light Pollution Abatement Committee (SLPAC). This group consists of SLPAC committee members and invited guests (usually those who's projects we are working on). This group has closed membership, but if you want to know the status of any projects, we always cross-post this to the National LPA group for everyone's information, or visit our pokily updated website at:

<http://www.ras.sk.ca/lpc/lpc.htm>

# The Planets This Month, March 2007

by Murray D. Paulson, Edmonton Centre

Last month we had an excellent apparition of **Mercury**, and I managed to follow it for several weekends in a row. It was surprisingly high in the evening sky. On February 22nd, Mercury passed in inferior conjunction with the sun and zipped into the morning sky. The ensuing morning apparition is unfavorable with the ecliptic at such a shallow angle with the horizon. Mercury will hit a rather lengthy elongation from the sun of 28 degrees on March 21st, but it will rise only 1/2 hour before the sun. The bright twilight will make the task of finding it just about impossible, so it is back to setting circles or the Goto scope for the next while. On March 21st, Mercury will

show you a 7" half phase at magnitude 0.3. Well worth the hunt!

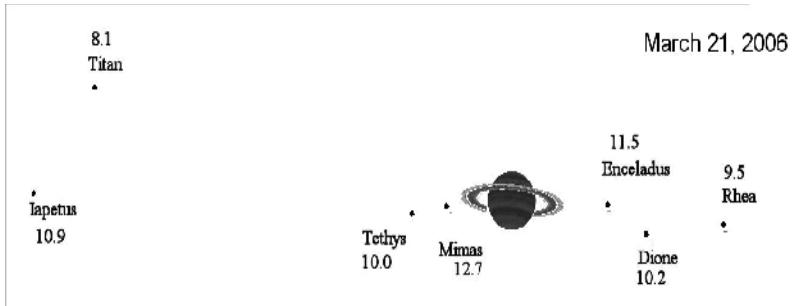


conjunction of the Moon and Venus 2.7° apart, on Mar 21. Last month's conjunction was quite pretty and we get an instant replay of the event. By the end of March, Venus will move to 36 degrees from the sun and shines at magnitude -4.0. It will show you a 14" gibbous disk in the eyepiece. Over the next 6 months, Venus will grow more than 4 times its size and slim down to a thin crescent. It is a fine observing project to watch the progression of its growth and phase from month to month.

morning ecliptic lies low, and Mars will be washed out in the twilight glare. Mars shines at magnitude +1.2 and will show you a 4.5" disk in the eyepiece if you can find it.

**Jupiter** shines at Magnitude -1.9 and sits in the constellation of Scorpius, or rather it trapezes through the bottom of Ophiuchus for the next few months. It now rises at about 2 a.m., and transits the meridian just before 6 am. So if you are an early riser, you can get a good look at Jupiter some morning, or do it on the way back from Blackfoot. When Jupiter transits the meridian, it crests only 14 degrees above the horizon, not great for high resolution seeing, but keep trying. You can never tell when the skies tighten up and reveal the details. In the eyepiece you can see its 39" oblate disk and set of four moons.

Last month was **Saturn**'s opposition and now it has become an evening object. Saturn is at +16 degrees declination, and sits high in the sky in stark contrast with Jupiter. It shines at magnitude 0.1, and makes a nice addition to Leo, ready to be harvested by that sickle. In the eyepiece you will see its 19.7" disk wreathed in rings. On the night of March 21, we get a grand alignment of Saturn's moons all along the axis of the rings. Enceladus and Mimas are well placed for visibility, as far from the planet as they can get on this evening. If you want to go for as many of Saturn's moons as you can get, this is a good night. The included chart is uninverted and with Equatorial north up. The local time is 10 p.m., but the alignment gets better just after midnight. Saturn's moons will sit in this sequence for most of the night. On March 28th, a nearly full moon passes just over 20 minutes of arc from Saturn. It will make a nice high power field and closest approach is just before 10 p.m. local time. Get your scope out and enjoy the dance!



**Mars** will pass through Capricorn this month, and now sits 43 degrees from the sun. Like in Mercury's case, the

Till next month, clear skies.

# The Messier, H-400 & H-400-II, FNGC, Binoc & EtU Club

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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>