

Saskatoon Skies

Vol. 37
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2006

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

Early August



Mid September



Early October



Late October



Opposition



Mid November



December



Murray Paulson from the Edmonton Centre, who has been writing "Planets this Month" for our newsletter for many years, sent this stunning montage of pictures of Mars as it made its approach to earth in October and then started receding again.



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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



Please bring 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.

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

RASC CALENDAR OF EVENTS

Jan. 16	RASC Executive Meeting -- 6:30 p.m., 175 Physics, U of S	Ron Waldron	382-9428
Jan. 16	RASC General Meeting -- 7:30 p.m., 175 Physics, U of S – Starry Night CSAP and SkyTheatre - A Valuable Teaching Tool , by Ron Waldron, Other talks tbd.	Ron Waldron	382-9428
Mar. 11	Fundraising Dinner	Norma Jensen	244-7360
Apr. 21-23	George Moore's Astronomy Workshop – Edmonton Centre	Sherry Campbell	(403) 433-1516
Aug. 24-27	Saskatchewan Summer Star Party - Cypress Hills Inter-provincial Park	tbd	tbd



BOOKS FOR SALE

by Bruce Brandell, Sales Coordinator

Some of the items are left from the Star Party. All will be available at our next meeting. Call 249-1119, or email bruce_brandell@yahoo.com

Title	Author	# Avail	Price
Calendars			
RASC 2006	RASC	4	\$11.00
Skywatcher's	Stan Shadick	2	\$16.50
Books			
The Backyard Astronomer's Guide	Dickinson & Dyer	3	\$45.00
Night Sky Atlas	R. Scagell	3	\$27.00
The Moon Observer's Guide	P. Grego	1	\$13.00
The Isabel Williamson Lunar Observer's Guide	RASC	2	\$10.00
Firefly Astronomy Dictionary	Firefly	1	\$13.00
Skyways – Astronomy Handbook for Teachers	M.L. Whitehorne	3	\$20.00
The Beginner's Observer's Guide	L. Enright	3	\$19.00
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

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: One Concord 60 mm x 900 mm focal length refractor on an equatorial mount, complete with finder scope. One Tasco 60 mm refractor (about 700 mm focal length) on an alt/az mount. Both are in new condition. Doug McMillan 382-0846.

For Sale: 10mm Speers Waler eyepiece for sale, \$100.00. Anyone interested can call Bob Johnson at 955-4618, or email bjohnson53@shaw.ca

**MONDAY, JANUARY 16,
7:30 PM – ROOM 175, U OF S**

Presenting

**Starry Night CSAP
& SkyTheatre -
A Valuable Teaching Tool
- Ron Waldron**

Other Talks TBA

Note:

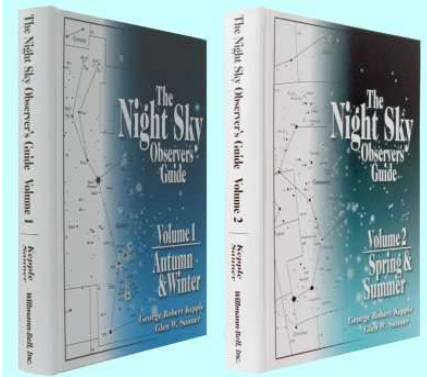
There will be an executive meeting at 6:30 p.m.



Happy New Year!

Book Review: The Night Sky Observer's Guide

by Jeff Swick



The biggest mistake I made in Astronomy was not purchasing this two volume set right off the bat. Having a GOTO scope is a great thing, but there are many nights I like to unwind by star hopping. This is a great set, not just for

at the scope, but also for planning your sessions.

Sure you can do it all by computer, but I'm an old fashioned kind of guy and this set is the bee's knees for putting together your evening's program. I'm not going to go into much detail on the charts and chapters themselves as the publisher Willman-Bell has made a chapter on the constellation Camelopardalis available for download at no charge. You can find the download, as well as what the reviewers have to say about it at the following URL

<http://www.willbell.com/handbook/nitesky.htm>

Why not try printing it out and taking it to your next session?

Each constellation comes with an overview, a section on interesting stars and a section on interesting deep sky objects. On top of that the descriptions are broken down into a 5 star rating system as well as descriptions of what to look for with your particular aperture of scope.

What I will talk about here is the added bonus to volume 1, the autumn and winter set. This contains a forward and introduction that rivals the astronomer's handbook. In easy English there is information that includes stars, spectra magnitudes and luminosities through all the various types of variable stars, the various types of nebulae and galaxies. I'll go so far as to say that even Al Hartridge would be happy with this set based on just the Introduction alone. 36 pages jam packed with relative and pertinent information and all this before we even get to the meat and potatoes of the book.

For those of you who stand around the water cooler at work pontificating about Intrinsic variables you'll be able to join in discussing the finer points of Delta Scuti variables as compared to W Virginis Cepheids.

All this for 35.00 USD plus shipping and GST ... it's the cat's meow.

Armed with this set, The Observers Handbook and Sky Atlas 2000 from Sky publishing you're "Good to Go". For an observing session or a cloudy evening at the kitchen table this is the set to get.

As Sky and Telescope says "A subtitle to the two-volume *Night Sky Observer's Guide* could have been *Burnham's Celestial Handbook: The Next Generation*. . . . (it is) a bible of very deep-sky observing, taking objects constellation by constellation with full-page charts and numerous smaller finder charts and drawings".

MINUTES OF THE EXECUTIVE MEETING December 12, 2005

1. Meeting called to order at 6:30 p.m.
2. Approval of minutes of the November meeting: Moved by Les Dickson, seconded by Ellen Dickson and carried.
3. Treasurer's Report: Norma Jensen presented the annual treasurer's report for 2005. Jim moved this be accepted, seconded by Mike Clancy. Rick Huziak made a motion to accept the treasurer's report with the amendment that the assets reported should be shown in a similar fashion to the previous years' reports, seconded by Ellen Dickson and carried.
4. Suggested changes to Centre Mail Delivery: At present some information is not getting through to the treasurer soon enough. If the key was transferred to Norma she would be willing to pick up the mail and therefore could obtain it quicker. A motion was made by Mike Clancy, seconded by Ellen Dickson and carried that the treasurer be given the key for the mail and that a second backup key be made.
5. SkyNews: Jeff Swick stated that he has been unhappy for some time with the delivery of the SkyNews magazine. Rick stated that the Journal and the SkyNews were scheduled to be delivered separately in the near future which should improve delivery time of SkyNews.
6. Lunar Observers' Group: Jeff Swick will set up a lunar observers' group email link. He is a presently investigating possible sites at which to hold observing sessions for those interested.
7. Fundraising: Peppercorn gift certificates are now available. The Centre receives a percentage from each ticket sold.
8. Membership: Mike Clancy stated that at present there are 77 members plus 9 temporary members.
9. SSSP: the Centre requires a new coordinator for the SSSP. Les Dickson would still be willing to take care of some of the duties.
10. Sask. Light Abatement Committee: report to be given at general meeting.
11. Newsletter Report: Tenho stated that things should be back to normal for the coming month.
12. Meeting adjourned at 7:30 p.m.

A Christmas Telescope

by Ron Waldron

It's the day after Christmas and I am excited! Not because I got everything that I wanted for Christmas but because of what I received that was completely unexpected. A telescope from my wife - yes you read correctly - my wife went out and purchased for me my second telescope. Let me begin to tell you how this happened.

As you may remember in a previous article in Saskatoon Skies, I told about my trip to Atlantic Canada last summer, most notably Nova Scotia and P.E.I. Entitled "In Praise of Saskatchewan Skies, I regaled about how fortunate we are to be living in "the land of living skies."

While there, I experienced only two clear nights, one in Windsor, Nova Scotia, and a truly stellar sky from the shores of P.E.I. Unfortunately, all I had for viewing was my 7 X 50 binoculars and they simply weren't enough. It was then that I truly realized I needed a second telescope, one that would be small enough to travel with as carry-on luggage on an airplane. I reminded her that we would be planning a trip to the south of Africa in the future and I simply must have a telescope to view the stars from the southern hemisphere.

I commented about this to my wife (you never really know how well they are listening). I also added that in my three trips to SSSP, I had noticed that many amateur astronomers had more than one telescope and that my second one should be a refractor.

On Christmas morning I opened up a box that was very deceptive in size, but upon

opening took my breath away for it contained an Antares Sentinel 80mm f6 Achromatic Refractor. It is a truly beautiful instrument, sturdy, well crafted and complete with its own carrying case. More information about the scope can be found at

http://www.scopestuff.com/ss_trs8.htm



Now it did not come with a tripod, but my wife said that too was in the budget and that I could order one right away. I settled upon the AZ-3 altazimuth mount from Sky Watcher as I do not want the ability to track objects but I do want the slow-motion controls provided by that mount.

I got my opportunity to test the telescope on my flimsy camera tripod from my backyard on December 27th at 1:30 AM. The sky cleared just enough for me to include three

objects in my new telescope's "first light". They were the Orion Nebula, Saturn, and the Pleiades star cluster. The views were tremendous even though sky conditions were less than ideal.



They say that behind every successful man is a woman. That is true for many and it continues to be true for me. It is a wonderful feeling when you know that your wife and family are quietly supporting you in the background as you make the nightly trek outside to view the heavens. I am very fortunate to have this support and will think about my wife often as I star gaze with the instrument from home, and soon from more remote locations.

MINUTES OF THE GENERAL MEETING December 12, 2005

1. Meeting called to order at 7:30 p.m.
2. Approval of the minutes of the November meeting: Moved by Mike Clancy, seconded by Les Dickson and carried.
3. Highlights of the Executive Meeting - given by Ron Waldron
4. Presentations:
 - slides of full cutoff lighting installed at Hampton Village in Saskatoon - Rick Huziak.
 - We Three Kings - The Christmas Star Revisited, a video introduced by Ron Waldron.
 - Messier and FNGC objects in the Sky by Tenho Tuomi who also presented a digital sky chart with all groups of major objects shown in their appropriate positions. This produced a spectacular wide-angle outline of the shape of our own Milky Way galaxy.
5. Gift Certificates: to Peppercorn Restaurant will be available till June. A percentage of each certificate sold will go to our Centre. Please buy these certificates to help support our club.
6. Prizes: Ron Waldron presented a quiz, part of an astronomy card game. Those first to answer questions correctly were rewarded with a variety of very nice gifts.
7. Meeting Adjourned at 9:15 p.m.

Markarian's Chain through Celestron's 114EQ Shorty

by Mike Clancy

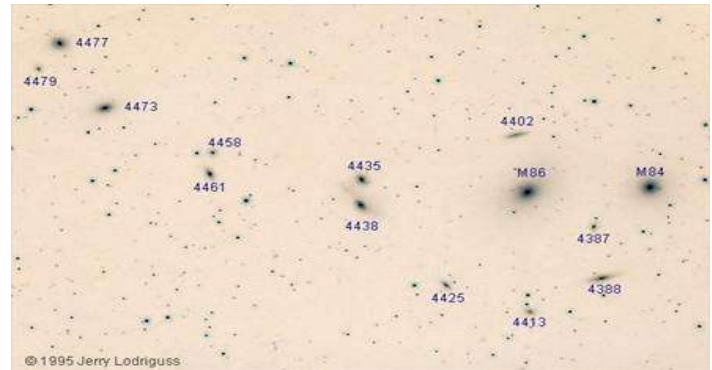
Let me just start out by saying you can't actually see Markarian's Chain in Celestron's 114EQ Shorty telescope, but you can look for it! (I found this picture on the Internet; thank you to Jerry Lodriguss for posting it there!) What I was trying to do was add to my Messier list early one December morning, most particularly all those dim little galaxies that comprise the Virgo cluster. The problem with those is not so much finding them as it is telling them apart; they are a confused jumble of smudges, barely distinguishable from one another.

Markarian's Chain, on the other hand, is a group of 14 or so galaxies spread out across the heart of the Virgo cluster, with M84 and M86 anchoring the right-most end. Both of these lenticular galaxies are approximately magnitude 9, which are well within the 114 EQ's viewing limit; Celestron says that the instrument has a limiting magnitude of approximately 13 under ideal conditions. I was using the 15mm Plossl which gives me about 67x magnification and the best field of view at approximately 1 degree.

I started in the early morning, 0630 hrs, from the veranda at our Hidden Ridge acreage, just East of Saskatoon. The temperature was hovering at 3°C and the wind (NW at ~30 kph) was blocked by the side of the house so I was very sheltered. The night was exceptionally clear, not something we've been used to of late, as all the stars of the Little Dipper were naked-eye visible (~mag. 5). First I saw Saturn beside Praesepe (M44) in Cancer, a fine showing at low power, then off to Mercury just above the horizon, and finally Jupiter, which I used to center my red-dot finder before viewing her dance with her moons. Then the real fun began!

I used two guidebooks in this journey, the "Messier Marathon Field Guide" by Harvard Pennington, and my "Sky Atlas 2000" by Tirion and Sinnott. I also used the "Backyard Astronomer" computer program to identify star patterns near some of the "faint fuzzies" I was trying for. I started "star-hopping" from Vindimatrix in Virgo to rho-

Virginis, and then concentrated my efforts between rho-Virginis and 6 Coma Berenices. I first found M60 (mag. 8.8) and M59 (mag. 9.9), both just wisps really. As I'd previously found them for my list during an observing session at the Stone residence at Gardiner Dam I moved on to M89 (mag. 9.8) and M90 (mag. 9.5). Both of these were fairly indistinct; I found M90 with averted vision. I tried



improving the view with my 10mm Kellner but it was absolutely no use whatsoever! I then moved down a bit to M87 (mag. 8.6) then off to M84 and M86 (both about Mag. 9) which actually made quite a nice view in the 15mm Plossl. I did try the 10mm again but got no improvement; certainly no better detail; both these objects looked like dim "fuzz-balls".

This, by the way, is the tie-in to "Markarian's Chain" as these two galaxies are seen at the extreme right of the image seen above. I then spent a lot of time trying to star-hop up and left a bit to M88 (mag. 9.7) and finally found it on the third or fourth attempt; just a dim blur, really. I then found M91 (mag. 10.2) beside it which I recognized because of the star patterns around it and very little else!

So, for a half-hour's observing and a lot more time than that in preparation, I came away with 9 Messier objects to add to my list. I now need just M68 and M83, both in Hydra and the list is complete!

Variable Star Results - We're Number Two!

by Denis Grey

Hello everyone,

The results are in and Canada is (drum roll please) - number two in variable star observations for the AAVSO in 2004-05!

Here are the national standings (number of observers in brackets):

1.	United States	367,415	(263)
2.	Canada	126,518	(31)
3.	Australia	104,068	(29)
4.	Belgium	65,899	(16)
5.	England	54,446	(28)

In 2003-04 Canada ranked #8 with only 24,588 observations in total from 42 observers. The dramatic improvement is in large part due to some exciting CCD work being done by Vance Petriew and Richard Huziak.

Find out more at:

<http://www.rasc.ca/rascnews/Varstars2005.shtml>

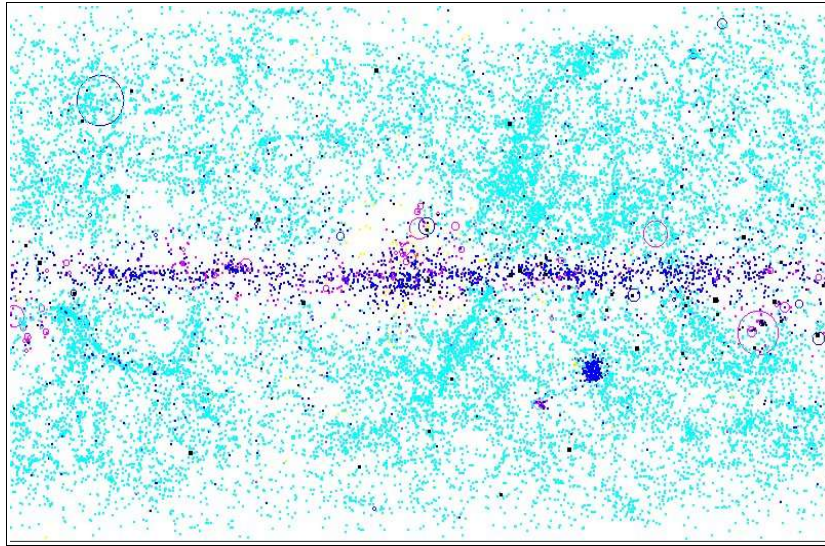
Clear skies and Happy New Year to all.

From RASCals Discussion List rascals@lists.rasc.ca
<<mailto:rascals@lists.rasc.ca>>, Dec. 31, 2005

A View of our Galaxy from CDs and NGC Objects

by Tenho Tuomi

Did you know that a computer CD is a good demonstration of the shape of our galaxy? The size of our galaxy, excluding the halo of globular clusters that surrounds our galaxy, is about 120,000 light years across. A CD happens to be 12 cm across, giving us a scale of 1000 light years to a millimeter. Our galaxy is about 2000 light years thick, and a CD is about 1 mm thick, so stack two CDs and you have a scale model of our galaxy. The central bulge of our galaxy is about 10,000 light years in size, so add a 1-cm ball to the center of your two CDs. The halo of globular clusters surrounding our galaxy is about 300,000 light years across; so enclose your CD model in a 30-cm ball and you have your model complete.



360x180 degree view of our sky looking toward the center of our galaxy. Open clusters and nebulae are in the plane of the galaxy (along the Milky Way) silhouetted against a backdrop of other galaxies. Note the central bulge of our galaxy blocking the view of other galaxies in the middle.

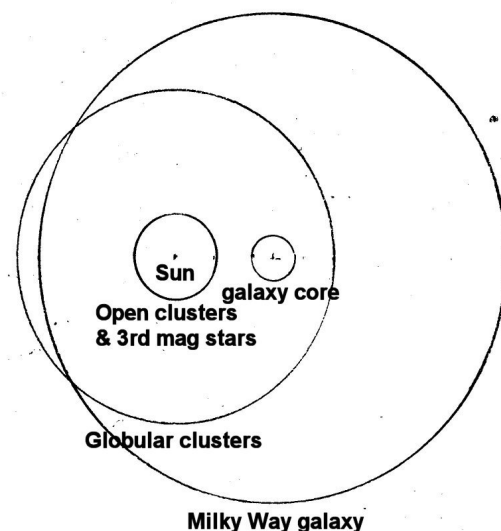
The different kinds of NGC objects are not distributed evenly across the sky and a study of those distributions can give us an understanding of the structure of our Milky Way galaxy. Conversely, knowing something about our galaxy will explain the distribution of NGC objects in the sky.

Taking Messier objects for an example, we see that 20 of the 29 globular clusters are seen in summer, while 34 of the 40 galaxies are seen in spring. Open clusters and nebulae are more evenly distributed but even there almost four times as many of those are seen in winter and summer than in spring and fall. These distributions can be explained by knowing that in summer we are looking toward the center of our galaxy and in winter toward the outside edge of our galaxy. Furthermore, due to the tilt of our solar system with respect to the plane of the galaxy, and the tilt of the earth relative to the solar system, in spring we are looking almost straight up into the north pole of our galaxy. This tells us first of all that globular clusters that we see in summer must be concentrated around the core of our galaxy. Then the concentration of external galaxies in spring must be due to the fact that we are looking in a direction that is least blocked by the dust in our own galaxy. The open clusters and nebulae are concentrated along the Milky Way. The Milky Way is not seen in spring for it is below the horizon for us in Canada. That explains why there are so few open

clusters and nebulae in the Messier list in spring. There should be many in the fall for the Milky Way is across the northern sky, but there are not. However there are several in the fall in the next list of fainter objects, the FNGC list, so maybe in the fall we are looking at a further away arm of our spiral galaxy.

How far do we see in our galaxy? First, external galaxies in the Messier list range from 3 to 60 million light years distance. Within our galaxy the furthest objects visible are the globular clusters, most of which are within 30,000 light years of the sun, with the furthest one being 88,000 light

years away. These distance are further than the 25,000 light years to the core of our galaxy, so they are our main glimpses into what is deep in our galaxy. It is no wonder that at the beginning of the last century astronomers could not tell these mini-galaxies apart from the external galaxies and thought that both were nebulae within our galaxy. The open clusters and nebulae are relatively close-by objects, with none in the Messier list over 10,000 light years distance. Our third magnitude and brighter stars are also within this same sphere.



Activities Coordinator Report

by Jeff Swick

Well here it is Dec 27 and I'm driving the editors crazy by missing the deadline, AGAIN.

Observing for the last couple of months has been less than spectacular. I've still not been able to test my new light pollution filter.

On the activities front I've been searching for a city location for us to utilize for the lunar observing program on those nights it's too bright to head out to Sleaford. I have a couple of locations scouted and should have some suggestions for the next meeting. Also by that time there should be an observing coordinator for Sleaford in place as well as a new chairperson for the SSSP.

I would encourage all members to sign up to the Saskatoon Centre's Yahoo list. It's a great way to stay in contact between meetings as well as to share astronomy news, questions and make plans for anyone wishing to head out to Sleaford. You can sign up by following this link:

<http://groups.yahoo.com/group/rascstoon/>

With 2006 coming I'm looking forward to having some clear skies. As we haven't had any to speak of I've been

spending a ton of time doing astronomy on the computer as well as picking up some books to take with me to the Dominican republic for reading on the beach...all heavenly globes I have discovered are not just in the sky, and the 300mm lens works well for terrestrial viewing as well as on the sky.

This vacation's readings are: Astronomical Photometry from Willman-Bell, Charles Wood's The Modern Moon, John Gribbois' The Search For Superstrings, Symmetry and the Theory of Everything, as well as his revised edition of In Search of the Big Bang, and a book by Dr. Ben Bova called Faint Echoes, Distant Stars which is on the science and politics of finding life beyond Earth...astronomers can be such a catty bunch.

One final thought from the last meeting was how impressed I was with Tenho's presentation at the Dec meeting. He start off by saying "I had a little time while waiting for the grain to dry so I wrote a little planetarium program" and from there proceeded to dazzle us with his ingenuity. Tenho, you amaze me.

That's it for this report. I hope to see you all at the Jan meeting.

Book Review: The Catalogue of Discordant Redshift Associations

by Scott Alexander

The first thing that I would like to say is that there are three books that should be on everybody's bookshelf. They are:

- Quasars, Redshifts and Controversies
- Seeing Red
- Catalogue of Discordant Redshift Associations

These books should be required reading in all astronomy courses and in all schools and other places of higher learning so that there would be another opinion on the subject of quasars and galaxies. But that will never happen because the powerful pro astronomers will never let this happen, because of the money, power and prestige of the offices that they have now. They will never give this up. If you want an example go get the book "Seeing Red", turn to page 257, and read that chapter. It is most enlightening.

The book "Catalogue of Discordant Redshift Associations" starts out with a history lesson on quasars and the redshifts that the pro astronomers say is the reason for the distances to the objects in the universe. Halton Arp shows that this is wrong, and why the quasars are found around galaxies, or aligned along axis of the galaxies in most cases. He also shows why bridges of matter that go from galaxies to quasars are not optical illusions but that they are real. He then tells

you about the catalogue, about the listed associations, suggested use of the objects, what to look for in the data, and the evolution of the objects in the catalogue. After this introduction you get into the catalogue itself. From page 47 to page 168 you have the lists of objects along with pictures of the objects where possible, and chart data for the objects along with any companions to the objects. A lot of the objects in the book will require a very big telescope to see.

Appendix A of the book looks at M101, a galaxy that most people would never think has this much stuff going on around it, but it does. Did you know that there are gamma ray burst objects around M101 and that they appear to be coming out of M101 along with other active objects?

In appendix B he talks about filaments, clusters of galaxies, and the nature of ejections from galaxies.

If you want to read a book that you can not put down for days, just like me, read these books. You will not be sorry you did.

"Catalogue of Discordant Redshift Associations" by Halton Arp (spiral bound paperback, 234 pages; ISBN 0-9683689-9-9) is published by Apeiron

The Planets This Month, January 2006

by Murray D. Paulson, Edmonton Centre

As Mars winds down, and Venus passes above the sun, we settle into the coldest month of the year. I am starting to watch Saturn as it rises up in the east over my neighbor's house. It is nice to have a second planet in the evening sky. If you are up to some daytime star hopping, Venus should be fun to hunt down as it passes over the sun.

Over this next month, **Mercury** stays within 10 degrees of the sun as it recedes from us on its way around the sun. Mercury passes in superior conjunction, just under 2 degrees below the sun, on January 26. It is now on the far side of the sun and its disk has shrunk to 4.8". Mercury now has swung into the evening sky, but it will be late in February before it becomes visible in the evening twilight.

The month of January starts off with **Venus** slipping out of the evening sky. On January 13th, Venus passes inferior conjunction, one whole synodic period cycle since we saw it pass on the face of the sun. You can try your hand at sighting the razor thin crescent 5.2 degrees above the sun, but take great care not to allow the scope to be pointed at the sun without a filter. Venus is really moving, and within a week of the superior conjunction, you will be able to see it rising before the sun in the southeastern sky. Despite the shallow angle of ecliptic, which would otherwise make the task hard, Venus is way above the ecliptic, and it pops up into the morning sky. Venus shines at magnitude -4.3 and will show a thin 59" crescent to any early morning observer over the last week of January. By early February, Venus will brighten to magnitude -4.5 and the crescent fattens up a bit as the size shrinks to 52".

Mars starts off the month at 11" and shines at magnitude -0.3. It no longer is the red beacon in the evening sky, but that color still catches the eye. By the first week of February, Mars will shrink to 8 arc seconds and will dim to 0.3 magnitude. It has been a great opposition, and there is still some good viewing. In mid January, Syrtus Major is prominent on the now quite gibbous disk. Over the next week, we see the Mare Thrrhenum and Cimmerium regions rotate into view with Syrtus Major on the terminator. By Month's end, Mare Sirenum is the faint wisp adorning the southern end of the planet. By the first weekend in

February, Solus lacus sits center stage on a now quite small planet. On February 5th, look for a first quarter moon half way between Mars and the Pleiades. Mars and the moon will be just under 3 degrees apart as in the evening twilight.

Jupiter is in Libra this month, and therefore is a morning object. It rises at 3 am and shines at magnitude -1.9. In the eyepiece you will see a 35" disk, just enormous after that last glance at Mars!

Saturn is now a good target in the evening sky as it heads to the January 27th opposition. It spends the month in the constellation of Cancer. At

the beginning of the month, Saturn shines at magnitude -0.1 and has a 20.3" disk. By opposition it brightens slightly to magnitude -0.2 and the disk grows imperceptibly to 20.45". The view in December showed the rings dramatically shallower than last year and what a contrast to Mars for size. On January 15th, the moon passes 2.7 degrees above Saturn and the

Beehive. Saturn skirts the southern edge of the Beehive over a two week long period starting around the time of opposition. This is a good reason to shoot a few images to catch Saturn in the cluster. A low power field of view should encompass Saturn and the cluster quite nicely. It should be a fairly nice sight in a telescope.

Uncertain what to buy for Aunt Emily or your cousin for Christmas?



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

Half the ticket cost goes to RASC.

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

Saskatoon Centre Does it Again

Bob Johnson writes

Just to let you know, I was awarded my Messier Certificate a couple months ago. It took 3 years to complete, I had to have just the right conditions to spot some of the harder items in my back yard, M101, M102, Virgo cluster. That's also why I traded my 8" scope for a 10" starhopper. Daryl Chatfield got me started and helped me out.

I also just purchased a Celestron Special Edition GOTO scope to reward my self for getting the Messier Certificate, This has increased my viewing of dsos from 10-20 a night to 60-100 a night, its great.

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:

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S.Ferguson, D.Jeffrey, D.Chatfield,
B.Christie, K.Noesgaard, M.Stephens,
B.Hydomako, T.Tuomi, L.Scott,
G.Charpentier, **Bob Johnson***

<u>Mike Clancy</u>	<u>Up!</u>	<u>108</u>
<u>Les Dickson</u>		<u>105</u>
<u>Brent Burlingham</u>		<u>97</u>
<u>Brent Gratias</u>		<u>96</u>
<u>Mike Oosterlaken</u>		<u>93</u>
<u>Lorne Jensen</u>		<u>89</u>
<u>Ken Maher</u>		<u>87</u>
<u>Margo Miller</u>		<u>77</u>
<u>Wade Selvig</u>		<u>75</u>
<u>Kathleen Houston</u>		<u>72</u>
<u>Garry Stone</u>		<u>57</u>
<u>Ellen Dickson</u>		<u>29</u>
<u>Norma Jensen</u>		<u>21</u>
<u>Brian Friesen</u>		<u>15</u>
<u>Barb Wright</u>		<u>6</u>

FINEST NGC CLUB

Certified at 110 Objects:

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

<u>Scott Alexander</u>	<u>97</u>
<u>Larry Scott</u>	<u>82</u>
<u>Bill Hydomako</u>	<u>55</u>
<u>Sandy Ferguson</u>	<u>23</u>
<u>Mike Oosterlaken</u>	<u>20</u>
<u>Mike Clancy</u>	<u>7</u>
<u>George Charpentier</u>	<u>4</u>

Chatfield BINOCULAR CERTIFICATE

Certified at 35 Objects:

*M.Stephens, T.Tuomi, M.Clancy,
R.Huziak, **Ken Maher***

<u>Brent Gratias</u>	<u>36</u>
<u>Mike Oosterlaken</u>	<u>32</u>
<u>Anna Clancy</u>	<u>24</u>

EXPLORE the UNIVERSE

Certified for Certificate:

M.Clancy, T.Tuomi

HERSCHEL 400 CLUB

Certified at 400 Objects:

D.Jeffrey, R.Huziak, D.Chatfield

<u>Gord Sarty</u>	<u>251</u>
<u>Tenho Tuomi</u>	<u>220</u>
<u>Scott Alexander</u>	<u>117</u>
<u>Mike Oosterlaken</u>	<u>68</u>
<u>Sandy Ferguson</u>	<u>18</u>

HERSCHEL 400-II CLUB

Certified at 400 Objects:

<u>Darrell Chatfield</u>	<u>250</u>
<u>Richard Huziak</u>	<u>211</u>

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 List – For those who'd like an electronic Messier list (with DSS images), check out:

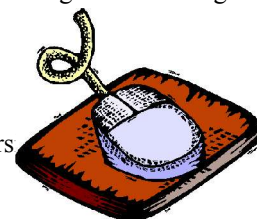
<http://www.seds.org/billa/dssm/messier.html>

On-line Finest NGC List – For those who'd like an electronic FNGC list, check out the Edmonton Centre's vers

<http://www.edmontonrasc.com/catalog.html>

On-line Herschel 400 List – For those who'd like an electronic Herschel 400 list, check out the official site at:

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



Editor's Corner

by Tenho Tuomi

Happy New Year! I wish you clear skies for 2006, at least clearer than we had in the last month where I seem to have set records for not observing the sky.

Looking back over 2005 I would say that the biggest achievement of our Centre for the year was the step taken to reduce light pollution by convincing the city to install full cut-off fixtures in the new neighborhood of Hampton Village. While this is experimental as far as the city is concerned, we are hoping that the city will see the advantage of using this type of lighting elsewhere. Thank you to those who worked hard to get to this point in our fight for darker skies.

Another highlight of the year was the support we received from the astronomy group in Prince Albert, headed by Ken

Maher and Kathleen Houston. They formed their own subgroup that supported the activities of the Saskatoon Centre, and indeed started giving fresh leadership such as Ken volunteering to co-edit the Saskatoon Skies newsletter.

In observing I think that the highlight of the year was the close approach of Mars, and high in the skies this time for those of us in Canada. This time we were ready for it with new technologies for photographing it.

My personal achievement for the year was seeing how far I could push an off-the-shelf consumer digital camera into astrophotography, by photographing deep-sky objects in the first half of the year, and planets in the second half of the year.