

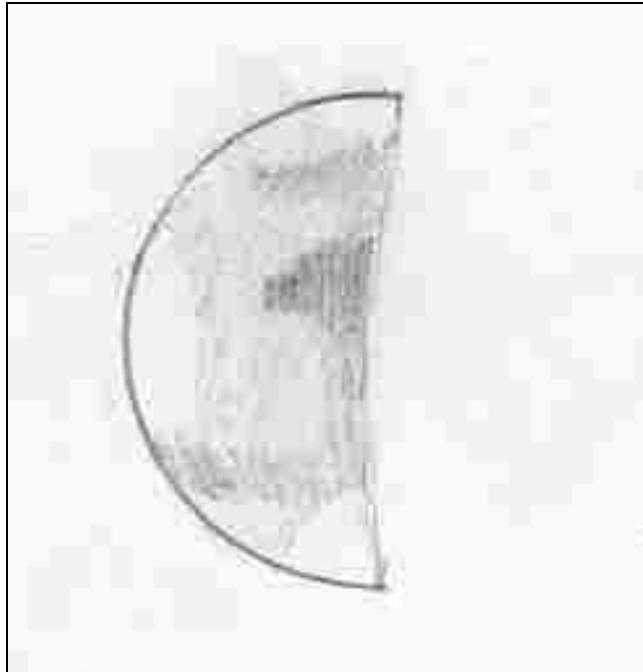
Saskatoon Skies

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

Volume 33

May 2002

Number 5



Planets, Planets Everywhere!

With the close alignment of 5 planets, and the moon joining the picture in early May, you might want to use the moon as a guide for finding some of these in daylight! Murray Paulson and I found Mercury at last year's Alberta Star Party in the early afternoon. Free of the seeing problems of the atmosphere at the horizon, I was able to see some faint surface features. The sketch was made on Sep. 15, 2001 using a 5" Starfire APO refractor at 300x and an orange filter to cut haze. *Rick.*

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Saskatoon Centre

The Royal Astronomical Society of Canada

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Membership?

Regular - \$52.00 per year

Youth - \$27.50 per year

It's never too late to join!

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, Bob Christie, or renew through the National Office and let Bob 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 2002
- The Journal of the RASC (bimonthly)
- SkyNews Magazine (bimonthly)
- use of the Centre library
- discounts to Sky & Telescope Magazine
- discounts of Sky Publishing merchandise
- discounts to Firefly Books
- free, no cost, no obligation, 3-month temporary membership if you don't want to join right now!

U of S Observatory Hours

The U of S Observatory is open to the general public every Saturday in May - July from 9:30 p.m. to 11:30 p.m. Admission is free. The observatory is located on campus, one block north of the Wiggins Avenue and College Drive entrance. On clear evenings visitors may look through the 6-inch refractor to the moon, star clusters, Jupiter, Saturn, and other exciting astronomical objects. For further information, phone the recorded Astronomy Information Line at 966-6429.

About this Newsletter

Newsletter Editor - Richard Huziak

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Bottle Drive & Canadian Tire \$ By Darrell Chatfield

Please remember our on-going bottle and now Canadian Tire money drive to fundraise for the Centre. Bring them to the May meeting. 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.

RASC Calendar Happenings

Date (2002)	Event	Contact	Telephone
May 13	General Meeting , Room 8313, City Hospital, 7:30 p.m. – <i>The Comet Movie</i> – produced by Peter Cerevolo & Doug George. NOTE EARLY DATE	Les Dickson	249-1091
May 14	Venus 1° N of Crescent Moon – find Venus & Mars in the daytime		
May 16	SSSP Meeting at Bob Christie's house , 143 Perrault Cres., 7:30 p.m. – new organizers welcome	Les Dickson	249-1091
May 17 - 19	2002 National General Assembly – Montreal Centre	On-line	
May 22	Noctilucent Cloud season begins	Rick Huziak	665-3392
May 26	Penumbral (71%) Eclipse of the Moon – begins at 4:13 a.m.		
Jun. 8	The 2002 Saskatchewan Star-B-Que – host by the Regina Centre	Rick Huziak	665-3392
Jun. 10	Partial (25%) Eclipse of the Sun – informal star party at east end of Weir in the early evening	Rick Huziak	665-3392
Jun. 12 & 13	Jupiter 2° E of moon (12th), Venus 2° E of moon (13th) – find Venus & Jupiter in the daytime		
Jun. 17	General Meeting , Room 8313, City Hospital, 7:30 p.m. The StarLab Planetarium – toured by Ron Waldron	Les Dickson	249-1091
Jun. 30	Last day of EARLY registration for SSSP 2002	Les Dickson	249-1091
Jul 11 - 14	Star-B-Q at Eccles Ranch Observ'y , Caroline, AB (site of ASP)	Roland Dechesne	(403) 246-4498
Aug. 3 - 11	Mount Kobau Star Party	Guy Mackie	(250) 861-3074
Aug. 9 - 11	Saskatchewan Summer Star Party 2002 – Cypress Hills	Les Dickson	249-1091
Aug. 12	Noctilucent Cloud season ends		
Aug. 12 -13	Perseid Meteor Shower Peak	Rick Huziak	665-3392
Sep. 5 - 8	Alberta Star Party – Eccles Ranch Observ'y near Caroline, AB	Rick Huziak	665-3392
Sep. 16	General Meeting , Room 8313, City Hospital, 7:30 p.m. – Results of the Star-B-Que & SSSP in Pictures – various members	Les Dickson	249-1091

Notice of the General Meeting of the Saskatoon Centre

Monday, May 13th, 2002 at 7:30 p.m.
Room 8313 City Hospital

Presenting: *The Comet Movie* – produced by Peter Ceravolo and Doug George of the Ottawa Centre. This movie is a computer rendered addition of hundreds of short exposures, showing Comet Hyakutake move across the sky all night long as the earth turns beneath it. This is a must-see production!

Thanks to Dan Neves for scooping the projection equipment & Stan Shadick for loaning the movie.

June 17 Meeting
The StarLab Portable Planetarium – Ron Waldron

I will have the planetarium set up in the meeting room. The StarLab is an inflatable dome used in classrooms to learn about the sky. You'll be amazed at its excellent quality. Note that this meeting was changed from May to June.

2002 Saskatchewan Summer Star Party Registration Update by Ellen & Les Dickson

Registration for SSSP 2002 is now underway. As of May 4, we have 4 registrants: Robert Eisner of Regina, Gord Sarty of Saskatoon, Ron Salyzyn of Sherwood Park, and Gary Barnes of Saskatoon. Gord Sarty is the first and only paid registrant from the Saskatoon Centre. So, what about the rest of you!? We have included an information sheet and registration form in this month's Newsletter. Take advantage of the lower registration fees for early registration, and register NOW.

Saskatoon Centre Books 4 Sale

The Saskatoon Centre has a number of Firefly Books left over from SSSP sales, and these are now available to general members to purchase at discount rates! There are only one or two copies remaining of the following titles. Contact Debbie Anderson at 242-8854 or bazoo.inc@shaw.ca. Prices include GST, shipping and handling.

- Binocular Astronomy (hardcover) - \$37.00
- Astrophotography (G.N.Patterson) - \$10.00**
- Exploring the Sky by Day - \$7.00
- Cambridge Star Atlas - \$35.00
- RASC 2002 Calendars - \$8.00**



- SkyWatchers Calendar - \$8.00**
 - RASC Stickers - \$0.50
 - Other Worlds - \$7.00
 - Extraterrestrials - \$8.00
- All prices are reduced.
Prices marked ** are reduced to clear.

Sky Buys and Mirror Cells The Saskatoon Centre's Swap and Sale Page!

Wanted: I'm looking for a **6mm eyepiece** – most any type will do. Call Gord Sarty at 966-2321 (work).

For Sale: *Astronomy*, by Menzel. 320pp. color plates-\$15.00; *Burnham's Celestial Handbook*, 3-vol set- \$30.00; *Sky Catalog 2000-Vol 2*, by Sinnott-\$30.00; **Brass lined trunk**-will carry an 8" or 10" SCT.-\$75.00; **Parts tool kit**, 16"x8"x7" - \$10.00; **9mm Kellner** eyepiece- \$20.00. Please note: all items are either in good, or excellent condition. Please call Darrell at 374-9278 for details.

Wanted: Piggyback camera mount to fit C8. Call Darrell at 374-9278.

For Sale: *The Messier Album* by John H. Mallas & Ewerd Kreimer, 1978 - \$4.00; *Observational Astronomy for Amateurs* by J. B. Sedgwick, 1971 - \$2.00; *New Horizons in Amateur Astronomy* by G. Fjernedal, 1989 - \$8.00; *Astronomy* (textbook) by F. M. Branley et al., 1975 - \$4.00; *Astronomy: Fundamentals and Frontiers* (textbook) by R. Jastrow, 1972 - \$4.00. Contact Les Dickson at 249-1091.

Scope Fixed!

From Lloyd Litwin, litwin@duke.usask.ca,
independent amateur

(excerpts from e-mail, used with permission)

Well we finally got my scope problem solved. I asked Yannis (at Physics) if he would help me and he agreed so I brought it in a couple weeks ago and we went to work. The problem was poor focus at higher power. After [the RASC] meeting I brought it to and the suggestion of beefing up the secondary end for stability before anything could be done, I did just that. Then I built my own laser collimator. I spent a year playing and remounting and realigning every part in the secondary and trying to make sure the focuser was perpendicular, etc. We collimated like crazy and no improvement. Yannis then figured we had a mirror problem. Stars came into focus as a line and out through the focus as a perpendicular line.

He suggested Mel Bartel could help. I didn't think he would but I sent an email. I got a prompt response saying the problem was astigmatism. [It] could be in the mounting of the mirror or could be the mirror itself.

At his suggestion we rotated the mirror and saw that the pattern followed the rotation. This proved the theory. I had mounted the mirror on 3 pedestals at 1/2 radius and then 6 "chairs" around the edge. I used silicone on the

pedestals and chair bottoms, set the mirror in and then added silicone between the chair backs and the mirror edge; a permanent (but I thought flexible) mount. I wouldn't have to make protective hooks to stop the mirror from falling forward. I was a genius!

When I carefully sawed out the chairs and cut off the silicone, we remounted the cell and without recollimating the mirror we took a peek. The star goes in and out of focus with concentric circles and the multi-ring interference pattern all the articles talk about are there. Unbelievable (to me)!

I went out last night and saw Jupiter as best as I have seen it with the high power lens. Not a great night or in an ideal location now but still vastly improved. I could see the two big lines plainly and as the sky came in and out. I saw other lines appear. I can't wait for a good night. Two years of frustration are over it seems! A simple fix after all.

I thought you might want to know so the next guy that builds a scope and has this problem, and shows up at RASC asking for help, can get a quicker solution!

Astronomy Day Results

by Les Dickson

The Saskatoon Centre contributed to the International Astronomy Day activities by setting up an information display at the Mall at Lawson Heights on April 20. This event was organized by Mike Stephens and Sandy Ferguson. Many of our Centre members came out to help, showing off their telescopes and talking to interested passers-by about our Centre and amateur astronomy. Some of us put in efforts "above and beyond". One case in point: Bob Christie worked with an older gentleman for at least an hour in an effort to work out the kinks in a 60 mm ETX refractor "go-to" telescope that the gentleman had received as a gift. Bob's efforts did not go unrewarded: the gentleman bought a full membership in the Centre and registered for our SSSP star party on the spot! Thanks Bob!

After the display was closed at 5:30 p.m., some of us went out for supper at the Tomas Cook restaurant before heading out for the public star night. This year, we set up in the Archibald Memorial Park on Spadina Crescent East. This new site worked well for us and the public, as it was more accessible to the city's population than our usual Beaver Creek site. Many people came out to see the planetary alignment that they had heard so much about in the media, and to see the planets through one of eleven 'scopes set up in the park. It was gratifying to hear people go "Wow!" at some of the sights they saw. Many had never even seen the Moon through binoculars, so when some of the children saw Saturn through a telescope for the first time, the delight on their faces was great to see. One child said, after looking at Saturn through my C8 at 200x, "Wow! It looks just like a photograph!"

I want to thank everyone who organized the event and came out during the day and evening to help us out. It is our main "public awareness" event during the year, and we appreciate everyone helping out to make it a success. For those of you who could not help this year, we look forward to seeing you out next year.

Observing Nite - April 11

By Darrell Chatfield

Hello everyone! I thought I would write about another observing session I had out at Sleaford with Rick H. and Bill H. The sky was marginal for the most part, but got better as time wore on (as usual). With a slight breeze present, there was no problem with dew. (I don't like having to deal with dew on all of the optical surfaces). It was also quite warm, with a temperature of +2° C.

I unpacked my Celestar 8" Deluxe after I arrived at the site at 9:30 p.m., and set-up on the East side of the warm-up shelter. Rick wasn't far away. (Bill didn't get out until later on, and set up in the dome).

I was anxious to try out the used 14 mm Meade UWA eyepiece that I had gotten off the web, so I scouted out some of the easier targets. This included M104 - which looked very good, NGC 4361, M57 – which showed the different densities in the famous smoke-ring; M65 & M66- with both appearing in the same field of view. M51 – gave a very good view , and of course, Jupiter and Saturn. The planets were not bad, but only because of the sky fog that was present. Overall, the eyepiece showed sharp views, even to the edge of the field. The eye relief is very good, which is a stated 20mm. The field of view is great, sporting a huge 84° field. It weighs quite a bit though and has to be counterbalanced.

Rick brought the new comet to my attention, which is Ikeya-Zhang. It was close to Cassiopeia. It was great, with quite a long tale visible. I studied the head of the comet in the telescope also. Rick also showed Bill and myself the geostationary satellites, of which there is now a sixth one. These are very interesting to look at, because they do not move out of sight in the telescope, (in this case, a Dobsonian) as compared to any other sky objects.

Bill was in the dome for a short time until something in the drive mechanism burnt out, so that shut him down for a while. Speaking of Bill, he let me borrow his new TeleVue 8mm Radian eyepiece for a bit. I was quite impressed with the sharpness and contrast of it.

Anyway, we all had a great deal of fun, even if we didn't hunt down 25 galaxies each!! See you at the site.

MINUTES FOR RASC EXECUTIVE MEETING

April 15, 2002, CITY HOSPITAL Room 8313

Recorded by Al Hartridge, Secretary

1. Approval of the revised agenda. Moved by Dale Jeffrey and seconded by Sandy Ferguson and carried.
2. Approval of the minutes of the March 18,2002 meeting. Moved by Al Hartridge and seconded by Scott Alexander and carried.
3. Astronomy Day – the setup for astronomy was discussed. Volunteers needed to help and setup scopes.
4. Light Pollution Committee – Rick Huziak would like the Centre to endorse a light pollution committee. Moved so by Les Dickson and seconded by Scott Alexander and carried.
5. Library – Sandy and Ellen would like to organize another bee on Sunday May 5th at 2:00 p.m. to clean up and further organize the library. Volunteers are needed to help.
6. Treasurer's report- present balance is \$12833.13.
7. Membership report – unchanged from last report.
8. Sleaford report- no change in status since last month. Bill and Rick have found an old drive that they may try and adapt to use for a photography base. Also a suggestion to put in a few benches at the site.
9. Meeting adjourned at 7:30 p.m.

The Planets This Month - May 2002

By Murray D. Paulson (Edmonton Centre)

Mercury started off the month just past greatest western elongation and what a great apparition it was. At this season, Mercury, as well as a host of other planets, is above the sun on the ecliptic. This permits them to set much later than one would expect. Mercury for example sets two hours after the sun for the first two weeks of May, then starts its rapid decent back to the sun. On May 26 Mercury will sit in **inferior conjunction** with the sun and then swing past and retreat into the morning sky. In early May Mercury shines at magnitude +0.1 but fades rapidly as the phase thins out. By May 13 it shows a 10.2" thin crescent and shines at magnitude 2. A **thin 38 - 40 hr old moon** sits 3-3/4 degrees south of Mercury and below and to the right of Saturn on this evening. All of them will be faint; this should present an interesting observing challenge!

Venus continues to rise in the evening sky. It joins some of the planets of this grand alignment to present us with a treat for our eyes. The first is with **Mars and Saturn**, the closest grouping occurring on May 5th - 6th. On the night of the 6th, you could see three planets in a very low power eyepiece field. On May 10th, Venus passes 22' of arc from **Mars**. The pair would fit nicely in a high power eyepiece field. Mars will shine at magnitude 1.7 and show a 4.3" disk. **The moon joins Mars and Venus** on the night of the 14th for a nice grouping suitable for binoculars. The moon will sit to the east of the planets. Later in May, Venus closes in on Jupiter and on May 30th **Mars becomes a member of M35**. This will create a very nice visual in the eyepiece. **Venus and Jupiter** will become the twins inside the twins; Venus at magnitude -3.9 and Jupiter at -1.9 - a wondrous sight indeed! On June 3, Venus sits at closest approach to Jupiter, 1.6 degrees above it. In the eyepiece Venus will be a dazzling 13" gibbous disk and Jupiter will be a 32.5" oblate spheroid - rather nice contrast in a medium power eyepiece.

Jupiter has been rather nice in the evening twilight. I find that I see more details in the twilight than later in the evening. There are two reasons. I think this is because the atmosphere has a while between the daytime heating and the cool of the night where it stabilizes for a time before the layers tumble and become mixed up. A second factor is that it is still light out and Jupiter's bright image doesn't tend to dazzle your eyes. By early June, Jupiter sets just after midnight.

Saturn is on its way out and disappears in the twilight glare of late May. Get your last glances at the ringed planet early in the month. The next time you will see it will be in the early morning hours in the late summer, probably at the Star Parties. Saturn lies in conjunction with the sun on June 8th, coincidentally the same date in two years time that Venus will sit in conjunction with and transit the sun.

The May 26th Penumbral Lunar & June 10th Partial Solar Eclipses

By Rick Huziak

On May 26th, the moon will experience a penumbral eclipse. You might *not* want to mark this on your calendar, but it is there to see anyway. During this eclipse, the 71% of the moon will slip into the earth's outer shadow – the penumbra. This shadow will barely dim the lunar surface – basically taking the 'luster' off, but the lowest (south) edge may dim a fair bit more since it is only 9.1 arc-minutes from the umbra at mid-eclipse. It is not particularly worth staying up for, but if you are up anyway during the very early hours of May 26th, you might want to check this out. Without any part of the moon entering the umbra, not much happens of any great interest! The eclipse begins (P1) at 4:12:48 a.m. and ends (P4) at 7:53:55 a.m. See the *Observer's Handbook 2002*, pp. 125 & 138 for details. For some reason, this eclipse is not noted on the 2002 RASC Calendar. The moon and sun are closing in for a close encounter two weeks hence.

On the other hand, you'll probably want to mark June 10th on your calendar, since that is the day that we see the next partial eclipse of the sun from Saskatoon. What we see is the dredges of a combination total/annular eclipse visible in the North Atlantic and barely touching landfall on Mexico as an annular eclipse right at sunset. For Saskatoon, this is an evening eclipse, with the entire event visible before sunset, unlike the July 30th, 2000 partial eclipse at sunset and the December 25th, 2000 partial eclipse at sunrise. This eclipse will begin 6:17 p.m., mid-eclipse is at 7:01 p.m., and the eclipse ends at 7:45 p.m. Maximum coverage of the sun is 27%. See the *Observer's Handbook 2002*, pp. 125-6, 134 & 139 for details. More can be found in your May/June *SkyNews*, on page 24.

As we did for the last two eclipses, the RASC will be making this a public event. While the University will likely have their on-campus observatory open for this, the RASC will be setting up on the riverbank at the east end of the weir (where we did for the July 2000 eclipse). There is a gravel access road just N of the Canadian Light Source parking lot entrance that leads you to a small parking lot near the weir. If you can bring a scope, do so. Otherwise, just come and look. If you are new to solar observing, we'll demonstrate several safe methods to view the sun. Note that a #14 welder's filter, available for about \$2 is a safe method to view the partial phases.

The 2002 Saskatchewan Star-B-Que

**Time****June 8, 2002**

10:30 a.m.
12:30 p.m. - 2:00 p.m.
2:30 p.m.

4:00 p.m.

5:00 p.m.
6:30 p.m.
7:30 p.m.

10:30 p.m. - Dawn

Dawn

This is a great opportunity to catch the jewels of the rising summer sky and a wonderful opportunity to enjoy the warm evenings on the Saskatchewan prairies. The event is being organized for members of the Saskatoon and Regina Centres of the Royal Astronomical Society of Canada. To cover the costs of the food, **\$5/person** will be collected.

Agenda**Davin Deep Space Observatory, RASC - Regina Centre**

Leave from Grasswood Esso

Lunch in Regina. Location to be determined

******* Technology Tour *******

Special technology tour of the Bratts Lake Solar Radiation Station -
Climatology Research (35 km South)

IMAX movie with a tour of the Kalium Observatory before or after the show.

Head out to Davin Deep Space Observatory (30 minutes)

Wiener roast put on by Regina Centre

******* Evening Outdoor Activities *******

If good weather - Horseshoes and other activities. An evening presentation might be given depending on the weather.

******* Evening Indoor Activities *******

If bad weather - Presentations by both Centres in the IMAX boardroom at Science Centre.

Viewing. Sunset at 9:07 p.m.

If cloudy skies - Outdoor presentations by both Centres at Davin.

Head back to Saskatoon or Regina.

Technology Tour

A tour of Environment Canada's Bratt Lake Solar Radiation Station will be done. The tour will include a visit to the underground bunker and the storage facility for the weather balloon. This station has the largest collection of instruments of any site owned by Environment Canada.

Kalium Observatory Tour and IMAX Show

The Kalium Observatory is the site of the newly constructed, Saskatchewan Millennium Telescope. This unique telescope is only the second telescope in Canada to allow remote-control access for taking images of the sky in real time. Either before or after the tour, you are welcome to attend a show in the Kramer IMAX Theatre. **The cost for the IMAX show is \$7.00 for adults, youth (4-17) \$5.00, child (0-3) \$3.75 and seniors (60+) \$5.00.**

Davin Deep Sky Observatory

The Regina Centre has a dark site situated near the town of Davin. There is a high fence for blocking the wind and excess light pollution as well as a warm-up shelter. Maps will be provided.

Evening Activity - Summer Games

Some of the evening activities may include horseshoes, lawn darts, beanbag toss or a casual walk around town. An evening presentation may be possible weather permitting.

Accommodations

Members of the Regina Centre are willing to billet people in their homes if you wish to stay overnight. Also, camping or tenting at Davin is also possible. There is no power or water, but there is a country-style outhouse :o)

Sample list of items to bring

- ✓ Telescopes and cameras
- ✓ Warm summer clothes
- ✓ Lawn chairs
- ✓ Drinks and snacks for observing
- ✓ **\$5/person** to cover wiener roast costs

To sign-up for this event, contact:

Saskatoon

Richard Huziak
Huziak@sedsystems.ca
W: 933-1676
H: 665-3392

Regina

Vance Petriew
vance.petriew@saskeds.com
W: 525-7100
H: 565-3086



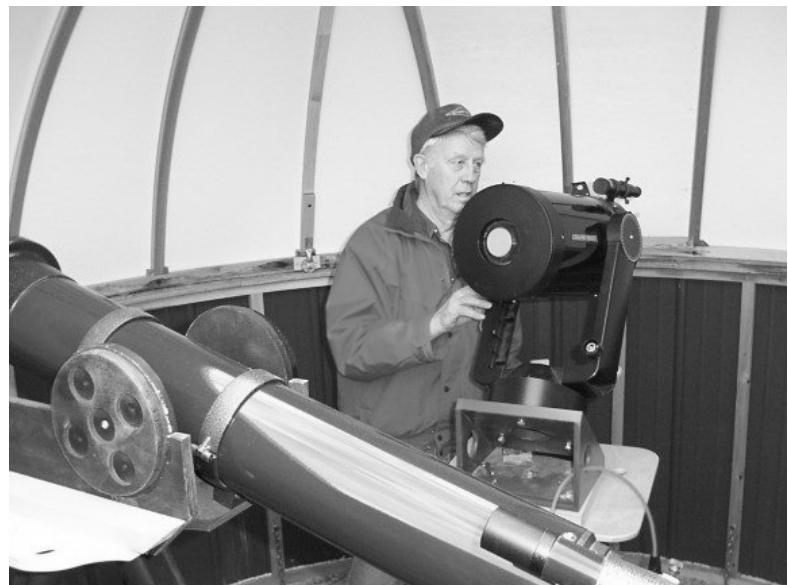
My Messier Marathon

by Tenho Tuomi, tuumi@sk.sympatico.ca
(excerpts from e-mail, with permission)

Sorry we could not make it to Sleaford for the Messier Marathon on April 13. I got as far as Garry Stone's place. He phoned some club members in Saskatoon and was advised that it was cloudy and not likely that anyone would be at Sleaford, so I set up my telescopes at his observatory and we had our own star party. We had four telescopes going; a 4.5-inch equatorial, 8-inch Dobsonian, 5-inch refractor, and an 8-inch Schmidt inside the dome (see pictures).

We started by observing Mercury and the day old new moon. Then we spent the rest of the evening comparing the performance of the scopes on the planets, close double stars, and various Messier objects, as much as the clouds allowed. We often found ourselves comparing our eyesight instead.

I have a new Messier count of an even 100 to report now. These were garnered mostly on the night of April 10-11 when I got back the 8-inch Dobsonian with its Telrad finder. My own personal Messier Marathon night! I even found the elusive M83. This will likely be all the Messier objects I can find until next fall.



The Messier, Herschel 400, Finest NGC and Binocular Club

Join the Club! Observe all 110 Messier, 110 Finest NGC, 400 Herschel, or 40 Binocular objects and earn great OBSERVING CERTIFICATES!

MESSIER CLUB

Certified at 110 Objects:

R. Huziak, G. Sarty, S. Alexander,
S. Ferguson, D. Jeffrey, D. Chatfield,
B. Christie, K. Noesgaard, M.
Stephens

Tenho Tuomi	Wow!	100
Mike Oosterlaken		93
Bill Hydomako		78
Wade Selvig		71
Lorne Jensen		49
Brent Gratias		39
George Charpentier		30
Stan Noble		28
Tyrone Klassen		26
Les & Ellen Dickson		20
Debbie Anderson		17
Brian Friesen		15

FINEST NGC CLUB

Certified at 110 Objects:

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

Scott Alexander	97
Mike Stephens	42
Ken Noesgaard	24
Sandy Ferguson	23
Mike Oosterlaken	20

Chatfield BINOCULAR CERTIFICATE

Certified at 40 Objects:
M. Stephens

Mike Oosterlaken	32
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HERSCHEL 400 CLUB

Certified at 400 Objects:

D. Jeffrey, R. Huziak

Darrell Chatfield	385
Gord Sarty	191
Scott Alexander	102
Mike Stephens	59
Mike Oosterlaken	68
Ken Noesgaard	44
Sandy Ferguson	18

The first 2 lists can be found in the *Observer's Handbook*. The Binocular List & Herschel 400 list will be available at each general meeting for 50 cents (covers photocopying) or can be mailed out on request to distant members. Each month I'll be posting updates.

Gord Sarty writes: "I was out at Sleaford on May 1st; I was the only one out. Not a bad nite. Got 20+ galaxies in Virgo with my 8-inch, some at 12.5 mag. I think my vision was better than last time out. So, on the "correct" H-400 list, I now have 191. Should break 200 the next time out!" [“Correct” H-400 list refers to the official H-400 list from Brenda Blanchard’s Florida site, not the H-400 modified list found at the Norwegian site! Make sure you are using the right list! – Ed.] Tenho Tuomi has also made a great leap in Messier observing. See his article elsewhere in this issue! Send observing numbers to huziak@SEDSystems.ca

MINUTES FOR RASC GENERAL MEETING

April 15, 2002, CITY HOSPITAL Room 8313

Recorded by Al Hartridge, Secretary

1. Presentations:
 - Darrell Chatfield Eyepieces- The Good, the Bad and the Ugly.
 - The Gang – The George Moore’s Astronomy Workshop
 - Les Dickson – The SSSP 2002 Logo and Update
2. Approval of the revised agenda – Moved by Darrell and seconded by Scott. Carried.
3. Approval of the minutes of the March 2002 General Meeting – Moved by Jim Young and seconded by Scott. Carried.
4. Treasurer’s Report- present balance is \$13833.13.
5. Membership Report- no change, 78 paid up to date.
6. Sleaford Report – Rick and Bill will us an old drive to build a tracking mount and will install on the outdoor pier.
7. Light Pollution Committee- Rick wishes to revive this committee and is asking for volunteers.
8. Library Report- Sandy and Ellen will run a clean out on May 5th at 2:00pm.
9. Astronomy Day – Will be held at the Lawson Heights Mall near the food court. Tyrone will set up a solar scope using projection. Set up at the Mall will start at 8:30 am.
10. Dot to Dot in the Sky – a beginner’s book for Kids was discussed.
11. Meeting adjourned at 9:45 p.m.

Earth Satellite PassesBy Les Dickson (from www.heavens-above.com)**International Space Station Evening Passes – May 10 and June 17***

Date	Mag	Starts		Max. Altitude			Ends			
		Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	
27 May	-0.3	23:05:06	10	SW	23:08:08	43	SSE	23:11:11	10	E
28 May	0.3	22:07:12	10	SSW	22:10:00	28	SSE	22:12:46	10	E
28 May	-0.8	23:42:37	10	WSW	23:45:46	74	S	23:48:57	10	E
29 May	-0.6	22:44:20	10	WSW	22:47:28	57	SSE	22:50:35	10	E
30 May	-0.7	23:21:50	10	W	23:24:59	82	S	23:28:11	10	E
31 May	-0.7	22:23:21	10	WSW	22:26:34	71	SSE	22:29:40	10	E
01 Jun	-0.8	23:59:21	10	W	00:02:30	76	SSW	00:05:07	14	ESE
01 Jun	-0.7	23:00:46	10	W	23:03:55	84	SSW	23:07:07	10	E
02 Jun	-0.7	22:02:06	10	W	22:05:17	80	S	22:08:27	10	E
02 Jun	-0.7	23:38:07	10	W	23:41:15	64	SSW	23:43:23	19	ESE
02 Jun	-0.7	22:02:06	10	W	22:05:17	80	S	22:08:27	10	E
02 Jun	-0.7	23:38:07	10	W	23:41:15	64	SSW	23:43:23	19	ESE
03 Jun	-0.7	22:39:23	10	W	22:42:32	79	SSW	22:45:44	10	E
04 Jun	-0.4	23:16:36	10	W	23:19:41	50	SSW	23:21:42	19	SE
05 Jun	-0.6	22:17:43	10	W	22:20:51	69	SSW	22:24:01	10	ESE
05 Jun	0.7	23:53:56	10	W	23:56:34	24	SSW	23:56:55	24	SSW
06 Jun	0.1	22:54:49	10	W	22:57:47	38	SSW	22:59:55	16	SE

Iridium Evening Passes Mag-2+ May 10 to June 17

Date	Local Time	Intensity (Mag)	Alt.	Azimuth	Distance to flare centre	Satellite
08 May	23:03:37	-3	17°	281° (W)	45.3 km (E)	Iridium 18
09 May	23:06:58	-6	15°	284° (WNW)	12.2 km (W)	Iridium 80
09 May	23:13:39	-6	18°	25° (NNE)	0.3 km (W)	Iridium 25
10 May	21:43:02	-8	55°	56° (ENE)	3.5 km (E)	Iridium 66
10 May	22:19:53	-5	10°	349° (N)	21.8 km (W)	Iridium 40
11 May	22:04:09	-3	14°	348° (NNW)	26.6 km (E)	Iridium 80
11 May	23:04:19	-3	13°	290° (WNW)	72.9 km (E)	Iridium 18
11 May	23:13:30	-3	11°	292° (WNW)	77.1 km (W)	Iridium 42
12 May	23:05:18	-7	24°	31° (NNE)	6.7 km (E)	Iridium 76
12 May	23:07:44	-3	12°	294° (WNW)	85.4 km (E)	Iridium 80
15 May	21:22:03	-7	63°	59° (ENE)	4.6 km (W)	Iridium 75
15 May	21:29:38	-6	22°	345° (NNW)	1.2 km (E)	Iridium 80
15 May	22:56:48	-7	29°	35° (NE)	5.3 km (W)	Iridium 23
16 May	21:23:00	-4	23°	344° (NNW)	12.8 km (W)	Iridium 81
19 May	22:42:05	-7	36°	39° (NE)	6.2 km (E)	Iridium 25
23 May	22:27:04	-8	42°	42° (NE)	1.3 km (E)	Iridium 46
27 May	22:11:22	-3	49°	44° (NE)	17.3 km (W)	Iridium 11
28 May	22:06:09	-8	50°	45° (NE)	2.4 km (E)	Iridium 3
30 May	23:27:18	-5	17°	20° (NNE)	10.6 km (E)	Iridium 32
02 Jun	21:44:04	-5	57°	48° (NE)	8.1 km (E)	Iridium 45
02 Jun	23:19:14	-4	23°	25° (NNE)	12.9 km (W)	Iridium 31
06 Jun	23:04:37	-7	30°	31° (NNE)	4.8 km (W)	Iridium 33
07 Jun	23:07:52	-3	33°	35° (NE)	15.5 km (W)	Iridium 94
10 Jun	22:48:55	-7	36°	35° (NE)	1.7 km (E)	Iridium 58
11 Jun	22:43:38	-3	38°	36° (NE)	17.9 km (E)	Iridium 55