Saskatoon Skies

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

Vol. 34, No. 11 **November 2003**

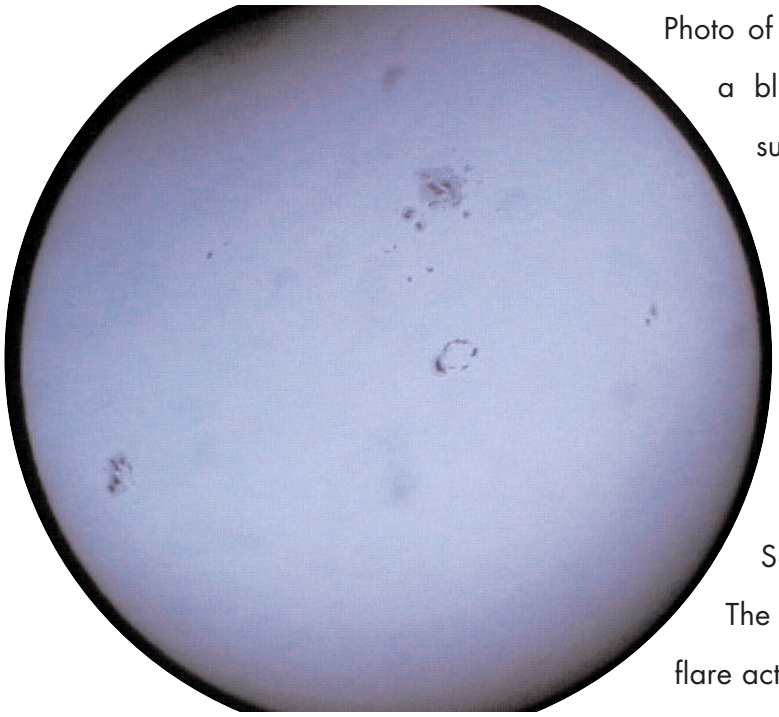

Photo of the sun taken by Garry Stone using a blue filter and solar filter. The large sunspot groups are among the largest seen in 22 years. Both were naked-eye visible, and both are larger than Jupiter. X-ray class flares emitted from these spots caused enormous aurora visible as far south as Arizona in the last week of October. Saskatoon and area was cloudy. The sun, however, is continuing enhanced flare activity, so put on your lead fishing hat!

In this issue...

Saskatoon Centre
The Royal Astronomical Society of Canada
P.O. Box 317, RPO University
Saskatoon, SK S7N 4J8
URL: http://prana.usask.ca/~rasc/
E-mail: huziak@SEDSystems.ca
Telephone: (306) 665-3392

Membership?

It's never too late to join!

Regular: $52.00/year
Youth: $27.50/year

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 2004**
- **The Journal of the RASC** (bimonthly)
- **SkyNews Magazine** (bimonthly)
- use of the Centre library
- discounts to **Sky & Telescope Magazine**
- discounts of Sky Publishing merchandise
- free, no-cost, no-obligation, 3-month temporary membership if you don't want to join right now!

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 Editor – *Richard Huziak*
Production & Layout – *Linda Janzen*
Copy – *Brian Friesen & WBM*
Collate – *Brian Friesen, Walter Essar, Jim Young, Les & Ellen Dickson, Yannis Pahatouroglou*
Labels & Temps – *Mike Clancy*
Web Posting – *Gord Sarty*

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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 .EPSs, .TIFs or .JPGs (.GIFs also accepted). Send e-mail submissions to the editor at <huziak@SEDSystems.ca>. 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.

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 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.

RASC Calendar of Events

DATE	EVENT	CONTACT	TELEPHONE
2003			
Nov. 14/15	**Star occulted by Saturn's Rings**	Rick Huziak	665-3392
Nov. 17/18	**Leonid Meteor Shower peak**	Brent Burlingham	244-9872
Nov. 17	**Executive Meeting** – Room 8313, City Hospital, 6:30 p.m.	Richard Huziak	665-3392
Nov. 17	**General Meeting – Leonid Meteors, by Kouji Maeda –** Room 8313, City Hospital, 7:30 p.m.	Rick Huziak	665-3392
Dec. 13/14	**Geminid Meteor Shower peak**	Brent Burlingham	244-9872
Dec. 15	**General Meeting** – program tbd – Rm 8313, City Hospital, 7:30 p.m.	Rick Huziak	665-3392
2004			
Jan. 19	**General Meeting** – program tbd – Rm 8313, City Hospital, 7:30 p.m.	Rick Huziak	665-3392
Feb. 16	**General Meeting** – program tbd – Rm 8313, City Hospital, 7:30 p.m.	Rick Huziak	665-3392
Mar. 14-27	**Messier Marathon dark period**	Brent Burlingham	244-9872
Mar. 15	**General Meeting** – program tbd – Rm 8313, City Hospital, 7:30 p.m.	Rick Huziak	665-3392
Apr. 19	**General Meeting** – program tbd – Rm 8313, City Hospital, 7:30 p.m.	Rick Huziak	665-3392
Apr. 24	**International Astronomy Day**	Brent Burlingham	244-9872
May 17	**General Meeting** – program tbd – Rm 8313, City Hospital, 7:30 p.m.	Rick Huziak	665-3392
June 21	**General Meeting** – program tbd – Rm 8313, City Hospital, 7:30 p.m.	Rick Huziak	665-3392
Aug. 12-15	**SSSP '04**	Les Dickson	249-1091

RASC meetings occur every 3rd Monday of the month except for July and August, or if a 3rd Monday occurs on a holiday. In this case, the meeting is generally moved to the 2nd Monday. Based on these rules, the above dates constitute this RASC calendar year of meetings. For the next year, no meetings are shifted due to holidays! Please write these on your calendar, so you don't miss a single one of our wonderful speakers this year!

Monday, Nov. 17, 2003 at 7:30 pm, Room 8313, City Hospital

Presenting:

Leonid Meteors Caught on Tape, and Other Great Astronomical Photos

by Kouji Maeda, Dr. Eng. Miyazaki University, Japan

Kouji was a member of our Centre seven years ago, and at that time showed us an excellent intensified video of the Perseid meteor shower. He is back again for a few months, and this time will show us a video of the Leonid meteor shower, and some other astrophotos he's been working on. Judging by his last presentation, you won't want to miss this one!

Honest-to-Goodness New Variable Discoveries

by Richard Huziak

Newly available data from a southern sky survey called ASAS3 now allows us to confirm new variables suspected from AAVSO and personal observations.

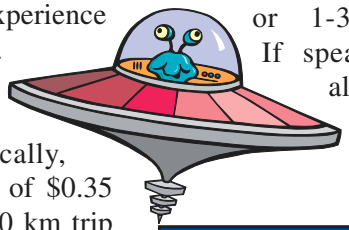
Telescope Construction Group

by Bill Hydomako <wm.hydomako@sasktel.net>

Other Centres of the RASC have groups and/or workshops that are set for their members to have the opportunity to build their own telescopes. This allows their members to reduce of the cost of obtaining a scope of reasonable quality and to gain an understanding of how a telescope is constructed, collimated and maintained. I'm thinking about getting a group going in the Saskatoon Centre to do something similar and I'm wondering how many people would be interested in building their own scope? I'm looking at building 8", 10" and 12" Dobsonian scopes utilizing a truss tube design, similar to the illustration with this article. Costs for the mirror sets are $310, $445 and $845 respectively for a finished primary and secondary. Costs for the rest of the materials should be around another $300 or up depending on how much you would want to put into the scope. I plan to offer my basement for the construction work and I would expect to start sometime next spring. What I'm looking for is how many people would be interested in building their own scope, what size of scope they would like and a timeframe of when they would like to build one. If you have an interest in building your own scope please contact me at 384-4781 or by e-mail at wm.hydomako@sasktel.net.

Travelling to Talk About Astronomy?

If you are requested to talk about astronomy or other science topic on behalf of the RASC, the provincial government has a program that will sponsor your costs. This program is called "Innovators in the Schools". Innovators is designed to bring science speakers into the classroom so that students can get first-hand experience from the experts that work in science fields. Provided your talk is for a grade K through 12 class, and if you incur expenses by traveling out of town, you can be covered. Typically, Innovators will cover travel costs at the rate of $0.35 per kilometer both ways for your trip. So a 50 km trip works out to a claim of 50 x 2 = 100 km x $0.35 = $35.00. This easily pays for gas and normal car wear and tear. If other expenses are incurred, then some of these costs may be covered, but check ahead to assure you will be reimbursed. All costs have to be approved in advance. One other thing, the claim has to be requested by the teacher you will be speaking to, so at the time of booking, get the teacher to contact Innovators to request they pay your expenses. Innovators then calls you to confirm the program and assures you of the reimbursement. Once the talk has been completed, you can make a claim directly to Innovators by fax, and they will send a cheque directly to you. The money is yours to cover your expenses. However, if you decide to donate a portion or all to the RASC, then you will receive a standard tax receipt at the end of the year. Innovators used to have an office in Saskatoon, but now the program has been consolidated into a single office at the Saskatchewan Science Centre in Regina. Teachers should contact Amber Didow, Innovators in the Schools, 2903 Powerhouse Drive, Regina, SK S7N 0A1, adidow@sasksciencecentre.com, 1-800-667-6300, or 1-306-791-7955, fax 1-306-525-0194. If speakers have any questions, they can also contact Amber directly, or contact Richard Huziak.



Sky Buys & Mirror Cells

The Saskatoon Centre's Swap and Sale Page!

For Sale: ***Astronomy 2002,*** by Robert Burnham – colour sky charts, planet information, etc. – $15.00.
35mm Bausch & Lomb Plossl eyepiece, fully coated. Excellent shape, in original box with dust caps – $80.00. Call Darrell at 374-9278.

For Sale: RASC Royal Centenary coffee mugs. Pick yours up at the next General Meeting – $9 each

For Sale: ***Millennium Star Atlas,*** 3-volume set – $200; **REALSKY CD's** – $200. Call Dale Jeffrey at (306) 223-4447 or dalejeffrey@sk.sympatico.ca

The Sleaford Page *by Rick Huziak*

Using the Telephone – Yannis has checked on the status of the telephone at Sleaford and has found the following. Although the telephone is long distance, it is on a "40/40 Plan". A 40/40 Plan allows phone calls up to 40 kilometers for a maximum of 40 minutes per month free of charge. Once 40 minutes has been exceeded (or if calls exceed the 40 kilometer radius), normal long distance rates are applied. Therefore, here are the clarified rules for the use of the telephone at Sleaford. You can make regular long distance calls back to Saskatoon (for example, to call family or other members), but try to keep the calls short, so you do not burn off the 40 allowable minutes. All calls are still to be recorded on the phone log near the phone. Other long distance calls are discouraged. Please use a phone card or calling card if you are going to make longer calls or calls out of the 40-kilometer radius.

The October 18th Open House – Our annual open house at Sleaford went pretty well, despite a far lower than expected turnout of the general public. Those who attended either read Stan's article in the Saskatoon Sun and came from Colonsay, or heard of the open house by word of mouth from two Colonsay school tours a few days earlier. About 60 people came by and got to do some sucker hole chasing with us, but got reasonable views of Mars and several deep-sky objects. At 8:30 p.m., the crowd also got a slide show about the history of the building of the Sleaford Observatory. A very positive aspect of the open house was the number of members who participated, 12 members in all. Even more impressive is where some of these members came from. We had Wade Selvig from Shaunavon, Kathleen Houston from Prince Albert, Tenho Tuomi from Lucky Lake, and winning the award for farthest traveled, past-member Kouji Maeda from Japan. (Kouji was a member of our club 7 years ago, and has returned to the U of S for another year.) After the crowd cleared away, so did the skies, and we spent a few more hours observing under nice skies.

School Tours at Sleaford – As part of our commitment to the Colonsay community, we sponsored three Colonsay School tours out to the observatory in October. On October 1st, we had 35 grade 6 & 7 students and their parents out. We had variable skies, but managed to show everyone several deep sky objects and a pass of the International Space Station. On October 2nd, we did it again, but with the 18 great kids from the grade 10 class, and 12 teachers and parents. Our sky was poor to start, but got better, and we were able to get to deep sky a bit later on. At the end of the tour, the Astro 212 class showed up, and we included these students in our tour, since it was their first visit to the site. On October 22nd, we toured yet another Colonsay class out to Sleaford, but this time, we entertained 47 grade 3 & 4 kids along with 15 parents and teachers. We impressed the group with the on-time appearance of a great –8 magnitude Iridium flash, and we again had sucker-hole skies. However, the highlight of the night may have been our serving if hot chocolate with marshmallows to the kids.

Not at Sleaford – While not a Sleaford presentation, I didn't want to start another article, but we also did a school presentation at Delisle Elementary School for Darren McKay's grade 6 class and their parents, 60 people in all. Although the Clear Sky Clock predicted dismal weather, the skies cleared beautifully, and we were able to supplement the slideshow with many exciting real-sky views.

I'd like to thank Tenho Tuomi and Brent Burlingham for help at Delisle School and Jim Young, Les Dickson, Bill Hydomako, Tyrone Klassen and Darrell Chatfield for helping out with the Sleaford school tours.

MEMBERSHIP LIST UPDATES...

Last month, we sent out an RASC Saskatoon 2003 Membership List. Every time we do this, it spurs a big round of corrections, so get out your pencils and make the following changes and corrections:

Email Address Changes:

Jim Wood	jk.wood@sasktel.net
Al Hartridge	ahartrid@sasktel.net
Scott Alexander	s.alexander@sasktel.net
Tenho Tuomi	tuomi@sasktel.net

Other Corrections and Additions:

Larry Scott	add equipment 15x70 binoculars, 10" Dob
Kathleen Houston	6" Dob
Brian Barnes	correct name to Bruce Barnes
David Goldek	correct name to David Goldak
Darlene Petit	remove incorrect email address
Yannis Pahatouroglou	moved – new address: 31 Anderson Crescent Saskatoon, SK S7H 3Z9

And Now for My First Trick . . . The View From the New President

by Richard Huziak <huziak@SEDSystems.ca>

This is my last issue as Newsletter Editor. After this issue, my energies for the next two years will be taken up as the new President of this club. I wasn't expecting to become President, since I've already done my stint between 1991 and 1995 or thereabouts. But as the elections approached, it became quite clear that no one was going to step forward into the presidency. This was not a desirable circumstance. But more on this later.

First, let me extend a great bunch of thanks to the now Past-president, Les Dickson. Les had a great two terms and managed to get a few things up and running during that time, namely completing and signing of the Sleaford Observatory agreement and getting the Sask. Summer Star Party running smoothly for many years straight – making it a fairly routine event to organize. Les also has a few projects that he has not completed, but as Past-president, he can still work toward formalizing the Family (or Associate) membership. Now, without the direct burden of being President, may he find time to finish this task, and maybe some time just to relax and observe now and then! You deserve the break. Thank you!

I have many ideas myself. In particular, what I'd like to help this club accomplish are the following:

A) To grow the club by adding new members. The reason for this is to bring even more diversity into the club. With more members, we can get more programs going, and can spread some of the work around to others.

B) Progress to the next step at the Sleaford Observatory by getting a plan together to get the 16" scope and observatory built.

C) I'd like to see an active Observing Group created, with disciplined activities for observing nights. Brent Burlingham is already working somewhat in that direction.

D) I'd like to assure that we get a line of succession going in the Executive, so that we don't have this year's problem again. Most other clubs plan their executive positions by grooming the Vice-president to become the President. Indeed it is expected that this succession will occur. It doesn't always due to personal circumstances, but it is much easier on the continuity of club activities to know who will be running their affairs for the future.

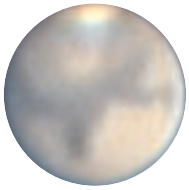
Then again, what I want is really not that important, and my agenda is certain to change. The job of the President is to lead the Executive, and the job of the Executive is to fulfill the wishes and wants of the membership at large. I need to hear from all members as to what you'd like to see this club do. I'd also like to know what I have to do to get you out to meetings or other club events. Over the next two years I'm sure we'll be addressing many issues. At the November meeting, we will also try to fill our vacant Executive positions. My first hope is that those who have volunteered their services for Councilor position might want to rethink this choice, and change to a named position.

One more thing; unless you want to hear 11 very cool lectures about Variable Stars, it's time to volunteer to give a talk at the General Meeting. We really (and always) need meeting speakers, for short 5-minute "What I'm Doing" talks, to full-length presentations, and everything in between. Every one of you has to have a specific interest in some topic in astronomy, or you wouldn't have joined. Let the club know what you are working on by giving a talk, or writing an article for the newsletter! If you hear of speakers coming through, or would like to see someone in particular come by, let us know. We will certainly continue to bring in speakers from the University, the community and from other Centres (which usually costs us quite a bit of cash), but this club is what you make it. Everyone needs pitch in and help out!

The Planets this Month, November 2003

by Murray D. Paulson, Edmonton Centre

The headline acts for this month are the occultation of an 8.4 magnitude star by Saturn on Friday, November 14th, and the lunar eclipse, Nov. 8th. Fourteen years ago I watched 28 Sagittarii do this same act, and at the time Sky and Telescope touted that events of this type only happen on average every 300 years. Wow, and I saw the whole thing! 28 Sagittarii was magnitude 5.4. The event was spectacular. This event will be very interesting as well even though the star is 15 times dimmer, or about as bright as Titan, Saturn's brightest moon. I would suggest that aperture and magnification will be the key to see the event. (Hint: use lots of each). With the 28 Sagittarii event, the high points were the passage through Cassini's division and the passage thorough the C ring. The C ring, or the Crepe ring, is an almost invisible ring that is on the inside edge of Saturn's B ring. For many years I was totally unaware of its presence, but when I saw 28 Sagittarii winking in and out about 18 times over a 15 minute period, in an apparently empty space, I was blown away! One other surprise that I saw was a multiple dimming and brightening as 28 Sagittarii re-emerged from behind Saturn. You will want to have a clock synchronized to the precise time or a short-wave radio tuned into the time stations to prepare you to see the emergence of the star in any one of the many emergence events. Saturn will have one other good thing going for it, altitude. At the start of the event, Saturn will be 21 degrees above the horizon, and by the C ring events, it will be 32 degrees above the horizon. Of course as the night progresses, it will only get higher and by the second set of C ring events, Saturn will be almost 60 degrees above the horizon. It will be close to 4 a.m. as well, but what the heck! You may want to have a nap for the 3 hours that it is completely blocked by Saturn, but don't miss the egress from behind Saturn. While you are at it this fine evening, watch Algol as it goes through minima at 2:43 a.m. while you are waiting for the star to emerge from behind Saturn. The decline to minimum takes 5 hours, so you should have ample time to watch it!



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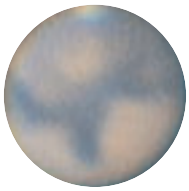

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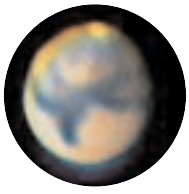


Oct 15, 22:55

These 4 images of Mars, taken by Murray Paulson with a video webcam, all show the face containing Syrtis Major, the obvious triangular. The photos were taken Aug. 8, Sep. 4, Sep. 13 and Oct. 15. Note the terminator changing sides of the planet as it passes through opposition at the end of August, and the dramatic shrinking in size by the mid-October.

Occultation of SAO 78867 by Saturn

All times derived from Guide. (Approximate to the minute based on Guide's model of Saturn) Alister and I have found quite disparate times, so be ready ahead of the event.

Event	Time CST
ingress A ring	23:39
ingress Cassini's	0:00
egress Cassini's	0:06
ingress C ring	0:43 to 1:06
Saturn ingress	1:09
Saturn egress	3:35
C ring ingress	4:56 to 5:19
Cassini's	5:55
Cassini's	6:01
exit A ring	6:22

The Lunar eclipse will be in progress as it rises on the evening of November 8th, and we will see the moon in the earth's shadow while the sun sets. From 7:06 p.m. to 7:31 p.m., the moon is in totality. It will be close to the horizon, so the photographic possibilities are endless. Let's see some more good shots from Canada in the major magazines and in the good web sites. By 9:04 p.m. the partial phase is over and we can watch the subtle penumbra slide off the moon. Sky and Telescope suggest that the last visible penumbral shading will be visible at 9:45 p.m. Let's cross our fingers on the weather!

The inner planets are all but invisible early this month, again casualties of the near horizontal ecliptic. I missed the morning apparition of Mercury in September, due to the fine Mars observing weather. Shooting Mars until 1 a.m. every clear night makes early mornings a bit tough. In later November, Venus should begin to be visible in the twilight glow about an hour after sunset. It will be a few degrees above the horizon in the southwest. The key to seeing it will be a good unobstructed horizon. Mercury was in conjunction with the sun on October 25th. It will become visible in early December as it swings high enough into the evening sky. Once again, this one will be tough, with Mercury very low in the southwest setting 1-1/2 hours after the sun. Find Venus, and then go back 8 to 10 degrees toward the horizon at a 45-degree angle to the north. You should be able to find it in binoculars. Over the first week of December, it will be around magnitude -0.5 as it heads toward its greatest western elongation on the 12th.

The beginning of November sees Mars shrink to 14.6" and its ruddy glow diminished to magnitude -1.1. This is about as big as Mars gets in an aphelic opposition. By mid month Mars has shrunk to 12.78" and by the beginning of December Mars will now be slipping down to 10.9". On Dec. 1 the 8.6 day gibbous moon will pass 4.5 degrees under Mars in the twilight and then the pair will spread apart as the evening progresses. By the 10th of December Mars will have dimmed to -0.2 magnitude and will finally drop below 10.0" as it culminates 35 degrees above the horizon. This apparition has been received with great fanfare and general excitement. It certainly will be one of the best I have seen. The apparition in 2005 will rival it only due to Mars sitting at a more northerly latitude. I have not enjoyed playing hide and seek with Mars and the trees in my back yard with 80 pounds worth of scope and mount! But it has been worth it.

Saturn finally is rising at a decent hour, making it an evening object rather than a late night - morning session. Saturn rises at 9 p.m. in early November and sits high enough to provide a nice view by midnight. The disk is 19.7" and it shines at magnitude -0.1. By late November, it rises just before 8 p.m. and is well placed for viewing after 10 p.m. It still is a bit low, but an hour makes a big difference. The planet is tilted 24.8 degrees toward us so the rings are well displayed. We will see them tilt a little more toward us as the month progresses. Saturn's moons orbits are tilted the same as the rings, so you will see them swing high above the poles of the planet. On the night of the occultation on November 14th, Titan will be preceding Saturn out at greatest elongation. Note: there is an additional 10.4 magnitude field star directly between SAO 78867 and Titan. This will be a good night to watch the motion of Saturn's moons over the 5-hour period.

Jupiter rises just around 3:00 a.m. and will show an early riser a 35.8" disk. It is the beacon of the morning sky and shines at magnitude -2.0. By early December, it will rise at about 1:30 a.m. It still is a bit early for the likes of me, but for the late night at Sleaford, it will be a treat.

Hermes is Found!

by Michael Boschat <mboschat@EASTLINK.ca>

Reproduced from the RASClist, October 15, 2003,
[bracketed correction from an email from Brian Skiff]

After eluding astronomers for 66 years, the long-lost asteroid Hermes has finally been retrieved.

Early on October 15th, Brian A. Skiff, Lowell Observatory Near-Earth Object Search, Arizona [LONEOS] sent measurements of four CCD images obtained with the [22-inch Schmidt located at Anderson Mesa outside Flagstaff] to the Minor Planet Center in Cambridge, Massachusetts. At the center, Timothy B. Spahr identified the suspect with other measurements submitted in the past seven weeks – but not recognized as unusual – by LONEOS and by the Lincoln Near Earth Asteroid Research (LINEAR) project in New Mexico. In addition, quick action by James Young (Table Mountain Observatory, California) secured a confirmation just before dawn on the 15th.

Judging by its brightness, Hermes is a minor planet about 1 to 2 kilometers across. So it could be somewhat larger than the 1937 estimates. In a famous exhibit at the American Museum of Natural History, New York, Hermes was depicted as a sphere about the size of Central Park.

Hermes is by no means the last of the "lost asteroids" – many thousands of others in the Minor Planet Center's database fall in this category because they could not be followed long enough for an accurate orbit to be determined. But Hermes is by far the most famous. It was discovered by Karl Reinmuth at Heidelberg, Germany, on October 28, 1937, and tracked for only five days. Although never officially numbered, it has been known by the name Hermes ever since.

In late October 2003, Hermes [was] bright enough (magnitude 13) to be seen in 8-inch and larger amateur telescopes as it races westward across Cetus, Pisces, and Aquarius. By month's end [October] it will be moving 7 degrees per day and gaining. Unlike the situation in 1937, when Hermes skimmed to within 800,000 km of our planet (two Earth-Moon distances), it will pass about nine times that far on November 4, 2003. Nevertheless, the possibility of future close encounters definitely puts this object in the PHA (potentially hazardous asteroid) class.

[Brian Skiff, Brian.Skiff@lowell.edu, responded:
"Thanks for copying the notice about the recovery of Hermes. It was certainly an eye-opening find at 3a.m. …The recovery announcement, along with elements, and an ephemeris are available from the Minor Planet Center: http://cfa-www.harvard.edu/mpec/K03/K03T74.html \Brian]

Editor's Note: *Since this article was written, Hermes has been probed by earth-based radar, and was found to be two asteroids in tight orbit around each other!*

Minutes of the Executive Meeting
Oct. 20, 2003, 6:30pm – Room 8313, City Hospital

Recorded by Al Hartridge, Secretary

1. Approval of agenda and additions. Moved by Jim Young and seconded by Ellen Dickson and carried.
2. Approval of Minutes of the previous meeting. Moved by Les Dickson and seconded by Jim Young and carried.
3. President: no candidate at this time. Les will continue on until December if no one comes forth. Ron Waldron suggested as a possible nominate for VP.
4. Centre Rep: is appointed by the Executive. Jim Young said he would do this and he was duly appointed to this position.
5. Newsletter: Rick Huziak would discontinue as editor if he was asked to become President.
6. Activities Coordinator: main duty is to organize Astronomy Day. No one has volunteered to run for this position.
7. Meeting adjourned at 7:30 p.m.

Minutes of the General Meeting
Oct. 20, 2003, 7:30pm – Room 8313, City Hospital

Recorded by Al Hartridge, Secretary

1. Presentations: Mr. Alan Dyer "The Coming Transits of Venus".
2. Elections:
   SSSP coordinator: Les Dickson
   Sleaford Coordinator: Bill Hydomako
   Sales: Bruce Brundell
   Observers Group and Activities Coordinator: Brent Burlingham
   Membership: Mike Clancy
   Fundraising: Darrell Chatfield
   Library: Ellen Dickson
   Centre Rep: Jim Young (appointed)
   Treasurer: Barb Young
   Secretary: Al Hartridge
   Vice President: Darrell Chatfield and Ron Waldron nominated.
   President: Rick Huziak
3. Meeting adjourned at 10:00 p.m.

[*Here are other results of the October election – Ed*]

Past-President: Les Dickson (assumed)

Newsletter Editor: vacant (Rick Huziak resigned), Chris Martin, Yannis Pahatouroglou nominated

Councilors: Scott Alexander, Gord Sarty, Brian Friesen, Gary Stone, Graham Hartridge, Jim Young, Ron Waldron nominated

BOOKS FOR SALE –
PLACE YOUR ORDER FOR CHRISTMAS
by Bruce Brundell, Sales Coordinator

We have a number of books, calendars and pins left over from SSSP Sales.

Title	Author	No. Avail.	Price CDN$
RASC 2004 Calendar	Rajiv Gupta, Editor	27	$13.00
Skywatcher's Calendar	Stan Shadick	5	$15.00
Messier Marathon		1	cost tbd
Nightwatch	Terrance Dickenson	1	$28.00
Astrophotography	G.N. Patterson	oodles	$ 5.00
SSSP 2003 Lapel Pin		5	$ 5.00
SSSP 2002 Lapel Pin		34	$ 4.00
SSSP 2001 Lapel Pin		24	$ 4.00
RASC Centenary Mugs		15	$ 9.00

Let me also recommend the following new titles from Sky Publishing Corporation (that would have to be ordered). If you'd like to order any books from Sky Publishing, let me know soon. RASC members will typically receive a 10% discount if the books are ordered through the Saskatoon Centre. Cost shown below are in US$.

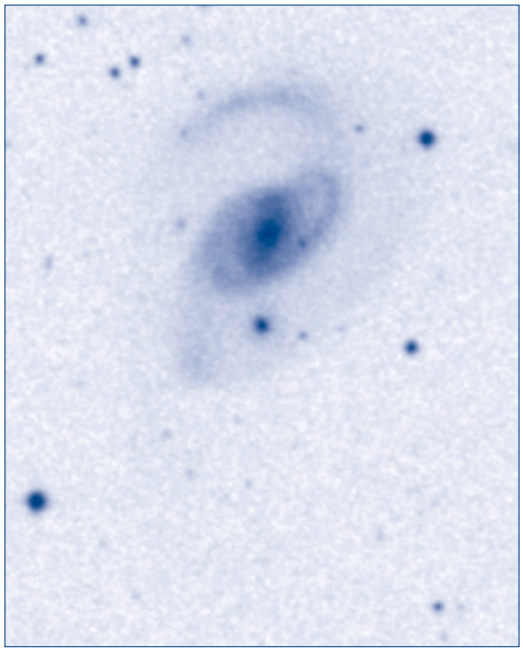
Title	Author	Price US$
Transit: When Planets Cross the Sun	Michael Maunder & Patrick Moore	$39.95
Parallax: The Race to Measure the Cosmos	Alan W. Hirschfeld	$23.95
Touring the Universe through Binoculars	Philip S. Harrington	$34.95
The Cambridge Star Atlas	Wil Tirion	$24.95

Call me at 249-1119 or see me at the November meeting to place an order.

OBSERVING NGC 4319 & MARKARIAN 205

by Scott Alexander <s.alexander@sasktel.net>

Hey everyone! I just thought that I would share an observation of the galaxy-quasar pair NGC 4319 & Markarian 205, which is in the constellation of Draco. (Note to Allan Hartridge: good picture taking opportunity here… hint…hint…) This pair of objects is quite easy to find. First you go to the star kappa Draconis (which is the second last star in the tail of Draco) and go up 2 degrees until you find a magnitude 6 star (which is listed in my Starry Night Pro program on my Mac as HIP 60699). (In a pair of 10x50 binoculars this puts kappa on the bottom, then half way up you should see the star 60699, magnitude 6.31). Then move star 60699 to the bottom of the field of view and look to the top left of the field. You will see the star HIP 60044 (mag. 5.46), and the galaxy and the quasar are right next to this one.



Markarian 205 is the starlike object dead center in this negative image from the Digital Sky Survey. The spiral above Mrk 205 is NGC 4319. There is strong evidence that Mrk 205 has been ejected from NGC 4319 since it is connected to the nucleus of the galaxy by a faint filament visible in very deep photographs. That interpretation is hailed by Halton Arp, an American astronomer who has questioned the red shift theory for the past 45 years.

Or if you are using a Telrad on your scope, put kappa on the bottom of the outermost ring and move up 2 widths of the outer most Telrad ring and the galaxies should be almost right in the center. What you will see when you look to the left of the star will be 2 faint halos of light.

The one closest to the star is not the galaxy we want. The galaxy closest to the star is called NGC 4291. It is a magnitude 11.5 galaxy, type E. In my observing notes I wrote that it was a featureless blob, bright center and a dim gray halo around that, no detail seen in it. It is the next galaxy over from the direction of the star that we want. That galaxy is NGC 4319. It has a magnitude of 11.9 and is 2.8 arc minutes wide x 2.1 arc minutes long and is a type SB(r)ab. The Deep Sky Field Guide to Uranometria 2000.0 calls it "very small, very bright nucleus" (if your telescope is a 50-inch or bigger scope! Yes it will be very bright in my 14.5". The center was not what I would call very bright.) "In a bright bar (same for bar – not bright) 0.4 x 0.13 arc minutes, two main faint arms." (They got the description of the arms right.)

OK – that is the galaxy. Now, on to the quasar. It is in one of the arms (in my scope it was at the top left of the galaxy), and I had to use averted vision (look slightly away from the object and it will become a bit brighter – you will use more sensitive parts of the eye). In one to two seconds, it popped into view (just like the Blinking Planetary, NGC 6826 in Cygnus). The quasar is a magnitude 14.5 object. The Observer's Handbook says 14.5. NED (the Near Earth Extragalactic Database) gives the magnitude as between 15 and 15.4. I will trust the Observer's Handbook first. Mk 205 is also a challenge object in the Handbook. What you will see is a star within the arm of the galaxy; this is the quasar. If you want to find the correct star go to the DSS (Digital Sky Survey) database at http://archive.stsci.edu/dss/ or http://nedwww.ipac.caltech.edu/ Both NED and DSS are where you can find all of the information and pictures of this object. Just put into the search field "MK 205" or "NGC 4319".

Quasars are supposed to be at the edge of the universe, at least according to current theory, but there is strong evidence that this quasar is physically attached the NGC 4319. Just think! When you look at this object, you could be looking at something that could mean the red shift could be wrong or that quasars are not at the edge of the universe, but are no farther away than the galaxies that they are near and *were created* from. (This might mean that most of the astronomy community that claims everything is expanding away from us are wrong!) Think about this!

And happy observing! Clear skies.