



Regulus



The Newsletter of the Kingston Centre of the Royal Astronomical Society of Canada - November 2003



The 61 cm Venor Dobsonian-Mount telescope.

2003 - The Year of The Observatory*

**Our primary goal this year is to find a location to build an observatory for the Centre in general and the Venor telescope in specific.*

Next Meeting(s)

Friday November 14th at 7:30pm
at Queen's University, Stirling Hall (Physics)
Theatre D
Annual General Meeting & Elections
Guest Speaker:

Annual Awards Banquet Saturday, November 29, 2003

at the Harbour Restaurant,
Portsmouth Olympic Harbour.
Drinks: 18:00 Dinner: 19:00
Speaker: Dr. David Turner, St. Mary's University.,
will join us for dinner and speak about Polaris in
particular and Cepheids in general. Title: "Will the
North Star Stop Pulsating?"

Friday December 12th at 7:30pm
at Queen's University, Stirling Hall (Physics)
Theatre D



Contents of this Issue

available at
<http://130.15.144.99/rasc/secure/regulus/reg200309.pdf> and include:
* President's Voice * Awards banquet
* NC Report * New Logo * Webmaster

Report * Fall'n'Stars Door Prize List * Clear Sky Clock
Status * Mars Meteorite * Observing Group * Public
Observing

Contents of the October 2003 issue are
available at :

<http://130.15.144.99/rasc/secure/regulus/reg200310.pdf>
and include: * Call for Editor * President's Voice
* Fall'n'Stars 2003 * Building Our First Observatory
* Responsible Lighting News * Ramblings from the Editor

Kingston Centre
of the Royal Astronomical Society of Canada
Box 1793 Kingston Ontario K7L 5J6
<http://www.rasc.ca/kingston>
infoline: 613-377-6029
email: rascexec@cliff.path.queensu.ca

RASC Kingston Email Lists:
rascckchat - about 20 members chat about
astronomy (no attachments)

President's Voice by Hank Bartlett



The deadline reminder that came for this issue of Regulus came with the note "The last paper version of Regulus for 2003 is the November issue, coming out in late October." While the year is presently far from over it does bring to mind how quickly this year is passing. This has not been a prime year for this observer to get out there under dark sky, I hope that does not hold true for the rest of you. My most memorable events of the year to date have been Astronomy Day, Sky is the Limit, Starfest2003 (where yours truly won first prize for a solar system costume) and Fall'n'Stars2003.

It does not seem that long ago we were all anticipating the approach and passing of Mars. The media coverage of this event had some thinking that Mars was going to practically be another Moon in our night sky. Observing this year was for most of course focused around the Mars pass. I and others managed to take photos (both digital and film) of the passing that many perhaps have never been able to before. With technology advancing so quickly, events that happen so infrequently seem to be recorded in leaps and bounds from one to the next. Although

Mars is unchanged since last close pass, my ability this to post my own image as the wallpaper on this computer has made this a far more special and memorable pass. It will be interesting to see what advances there are in image resolution for the average astronomer in 2018.

Although there was a lack of interest in an actual Mars Public Observing session, I think that many of us had more new eyes peering through our eyepieces at this event than any other. The reality is that even though overblown, the media coverage of events like this fosters a wider interest in astronomy than ever before. This wider public interest of course also translates into more members. The more members we have the better our representation at the RASC National level and the wider base of fresh volunteers we have to participate in the Center's activities. New growth is essential in maintaining and revitalizing any organization, remember to tell people who you are and who RASC Kingston is.

I remind you all again that Nov. 14 is elections, come to the meeting and vote! If you are so inclined come to the meeting with your nomination and run for office, all positions are open. There are members of the current executive who are not running again, myself included, so come and see that no positions are left open or have to be doubled up. The coming year will need a strong executive to follow through with plans that are in their infancy at the present. From a Centre business standpoint we are awaiting our charitable status from the Federal government, working towards incorporation, alternate funding and awaiting a decision on a grant.

The next time I write to paper copy it shall be as Past President, until then I wish you all excellent observing, a very Merry Christmas Season and a Happy New Year!

Share the view, Hank



Annual Awards Banquet

Saturday, November 29, 2003

at the Harbour Restaurant,
Portsmouth Olympic Harbour.
Drinks: 18:00 Dinner: 19:00

Speaker: Dr. David Turner, St. Mary's University., will join us for dinner and speak about Polaris in particular and Cepheids in general. Title: "Will the North Star Stop Pulsating?"

Tickets are \$25 and can be purchased at meetings August, Sept, October, and November. or by mailing in cheques to the Centre mailbox, please mark them attn. Susan. Tickets may be requested by telephone to Susan xxx-xxxx but only cold hard cash (or cheque) will get you beyond the **deadline of November 24 (Monday)** before. Please notify Susan early if you have any food allergies or vegetarian needs. Menu will be announced well in advance.



Report from the National Council Meeting of Saturday October 25th, 2003 at the Ontario Science Centre in Toronto by Kevin Kell

Due to various reasons, I found myself sitting as an observer at the national council meeting. Any RASC member may sit in at the council meetings as an observer, and at your own expense.

A more complete report will be given by our National Council Rep, at some point in the future. From the national email list

> I see that on October 25, 2003 (Saturday), in Toronto, at the Ontario Science Centre there will be held the RASC NC034 National Council Meeting. Being the new family on the block, can someone please fill in the details? What goes on at the National Council Meetings? Can anyone attend? Is there a cost involved? How long, etc?

Inquiring minds want to know.....

One reply

"It's a one day event. Being a center, you have a center rep who can sit and vote and should make an effort to show up. It's free but you need to eat lunch. It will last all day.

This council meeting typically is a sleeper, the fall one doesn't have the budget and there isn't anything controversial on the agenda.

...
Should an rank and file member show up? My thinking that unless you are keenly interested in national politics you probably better off not going. You certainly make sure your center rep goes and bug him to find out what happened. Of course, others disagree."

And another reply:

" Anyone who is a member of the RASC can attend. There is not any cost involved such as a fee to attend the meeting. There are, of course, travel expenses.

The business of the RASC is discussed. Items like expenses, upkeep of the national office, the publications of the society, grants for centres, fee structures and astronomy day are discussed, to name a few. A meeting generally lasts from 09:00 or 10:00 to 16:00 or 17:00. On some occasions, where much business is on the agenda, the morning of a second day is needed, but this is known well in advance.

National meetings are an interesting affair. Robert's Rules of order prevail and at times an awful lot is said around a unanimous decision. It is always fascinating to watch a group of people working together. The best feature of the RASC is that everyone in the society is a worthwhile person to get to know and national meetings are a great gathering of people from across the RASC."

The following motions are the meat of the meeting and I have included the boring ones like #1 and #2 to keep the numbers straight in my mind as I write this.

Motions #1 and 2 were the agenda and the minutes.

Motion #3 and 4 was on the amended travel policy, which basically gave the Chairs of special committees the right for reimbursement. Passed.

Motion #5 was to direct the finance committee to review the travel policy with an eye towards the costs indicated (eg hotel room of \$75 in Toronto? Not a chance). Passed. Send your comments to finance@lists.rasc.ca

Motion #6 & 7 were to vote in unattached members and the tabling thereof. Passed

Motion #8 was to separate out S&H from publication pricing. Passed

Motion #9 was to reduce the size of the annual report and place the leftover material on the web site. Failed.

Motion #10 was to untable the unattached members and vote them in. Passed

Motion #11 was to take the Okanagan Centre bylaw revisions away from the Constitution Committee, who hadn't been heard from in months, and have the Executive Committee act on them by Nov 30. Passed

Motion #12 was much the same, this time for the Kitchener-Waterloo Centre. Passed

Motion #13 was to amend the skyways pricing to split out shipping and handling. Whoops, there was already advertising out. Motion #14 accepted revised bulk pricing. Passed

Motion #15: Accept a newly revised "canadianized" B&W and Colour National Logo. See the MAP report for more details. Passed

Motion #16: Pass authority for granting observing certificates away from secretary and national council to the observing committee. Passed

Motion #17. Give the Info Tech committee \$30/year for backup DNS service. Passed

Motion #18: Light Pollution Committee wanted another \$300 budget this year. Passed

Motion #19: Accept new Liability Insurance package (\$5 million) as old one (\$2 million) was discontinued). Passed.

Motion #20: Set up a new class of membership: sustaining member and charge extra \$\$\$. Forward to Finance committee for review.

OK, these are based on my rough notes and may not have any bearing to reality. We won't find out for sure until the minutes of the meeting come out sometime in before February 2004.



"Old" logo



"New" B&W Logo



"New" colour logo



News from the Webmaster by Kevin Fetter

In Jan of 2003, I took over as webmaster of the centre's website from Kevin Kell.

First thing was to change the front page, to make finding info I hope easier. I added a section on celestial events, so you know what some things are to observe, since that the point of astronomy, to observe. Things in the celestial events section of the website are, things like lunar and solar eclipses, lunar occultations, links to a site on

satellite watching- something I really enjoy, as most members know and joke about. I also added a picture to the main page showing space weather ie aurora. I had modified the page on how to join the centre, since I found the info on two different pages could be stuck together to make one. I added some info on time to the site, since time is important in observing. Kim Hay has helped with the light pollution page and sending me info. Kevin Kell has helped on other stuff, so my thanks to them.

There I finally wrote a report :)

FALL' n 'STARS 2003 PRIZE LIST

The BELLEVILLE & KINGSTON CENTRES of the Royal Astronomical Society of Canada

The following prizes were donated for Fall'n'Stars 2003.
Our thanks goes out to those businesses and individuals who contributed.

Alphabetical list of Grand Prize Donations

Grand prize - 2 book set, Night Sky Observer's Guide \$125.90
EfstonScience - <http://www.esci.com/contact.html> Toronto, e-mail to info@e-sci.com 1-888-777-5255

Certificate for a copy of ECU Pro / Earth Centered Universe Software \$96.00
Nova Astronomics, David J. Lane, Halifax, Phone: 902-499-6196 E-Mail: info@nova-astro.com

Alphabetical list of commercial donations

1 x E.T. Reel Coinz
Canada Post, Newburgh

24 packages of meteorite samples and fulgurites plus a 3 Grain sample of Zagami Mars Meteorite
Meteorite Shop Dean Bessey, <http://www.meteoriteshop.com/> P.O. Box 6306 Stn A Toronto M5W 1P7

4 x Long Eye Relief (20mm) Fully Coated 45 degree Eyepieces & 6 x Red Glowsticks
O'Neil Photo and Optical Inc. (519) 679-8840 E-mail: joneil@oneilphoto.on.ca <http://www.oneilphoto.on.ca/>

1 x 25mm and 1 x 17.5mm Plossl Eyepieces and a 2X Barlow
TalScopes <http://www.talscopes.com> 599 Norris Crt Kingston K7P 2R9 Tel. toll free (866) 384-4144

Alphabetical list of non-commercial donations

\$20 gift certificate for Fall'n'Stars 2004
Fall'n'Stars 2002 Committee

3 x Alien Pens and one ("ROCK SOLID") tripod.
RASC Belleville Centre

2004 RASC Calendar and a Beginner's Observing Guide
RASC Kingston Centre

Fall'n'Stars 2003 Raspberry Merlot Gift Basket
RHA Observatory, Hank & Di Bartlett / Scarf made and donated by Sue Gagnon

One red LED flashlight and one small gooseneck flashlight
Joe Shields

4 sun/moon placemats
Starlight Cascade Observatory Kim & Kevin Kell

UFO Hunter Handbook, Children's book on Black Holes and A Lego Bionical
Roberta Scanlon

News from Other Places**Clear Sky Clock**

By Atilla Danko

About 95% of users of Clear Sky Clocks can no longer reach them as of Friday October 24.

Because of confusion with my webhoster, I've lost the registration of the domain cleardarksky.com. An annoying advertising site has grabbed the domain name. So a lot of people's bookmarks and links no longer work.

However, I'm still updating clear sky clocks and my server its up. You can access them through:

<http://www.pobox.com/~clearskyclock/csk>

That link will continue to work even when I have a new domain set up (or when I'm lucky enough to recover the old one.)

If you have web pages that are displaying clear sky clocks or linking clock pages, your html is broken. To fix it, use text editor to do a bulk change to replace all instances of

<http://cleardarksky.com>

or

<http://www.cleardarksky.com>

with:

<http://www.pobox.com/~clearskyclock>

If you want to keep using the clocks and are having trouble fixing your links, please feel free to email me.

Please feel free to forward or post this to other Clear Sky Clock users who can no longer reach the clocks.

Atilla Danko

Ps. Oh yeah. Another mess: If you've used the PayPal donation form on the clear sky clock site between Friday morning October 24 and Sunday afternoon October 26, there is a totally separate problem. Your payment may have gone to danko@magma.com which is a non-existent email address. I suggest you rescind payment and email me if you think this may have happened. (However, the PayPal donation form is working correctly now.)

Submissions from Members**MARS METEORITE LANDS ON FALL 'N' STARS PARTY - NO ONE HURT!**

by Ken Kingdon

Now, there's a Headline that's a real grabber!

As shocking as it seems, nevertheless, it happened. A piece of one of the very rare Mars meteorites happened to land on the door-prize table at this year's Fall 'n' Stars starparty on September 27th. I was shocked!

We know that roughly 18,000 meteorites have been found in Antarctica alone, and another 6,000 have been found elsewhere on Earth (eg, Canada has 60). Most arrived from the asteroid belt. Of these 24,000 meteorites, only about 12 meteorites are confirmed to have arrived from Mars. However, most are locked away in museums or other institutions, leaving only about 4 kg in private hands that can be acquired by individuals.

Before this starparty, I had heard that a Mars meteorite would be offered as a special prize - quite amazing, since I knew that they are very rare and expensive. When I examined this prize before the draw, it appeared as expected - 3 very small separate grains in a clear sample-box. Being small, its understandable why this prize was declined by the first six winners in the door-prize raffle. I drew the 7th selection, and I was delighted to see it still there on the prize table, and so it became mine.

A wee while ago, back in a high school English Literature class studying Shakespeare's "Hamlet", I came across a profound line that has stuck with me all my life..."I could be bounded in a nutshell and count myself a king of infinite space". One interpretation of this line is that even a very small item can hold a Universe of detail to explore. Upon reading those words, I was changed... observing the smallest details and making the most of them became a life long joy for me. So, it seemed that this tiny sample of Mars had been destined to find its way to me, and I knew that it had found a person that would enjoy exploring it.

This sample is a claimed to be fragments of the famous Zagami Meteorite which fell to Earth in 1962 near Zagami Rock in Nigeria. It landed about 3m away from a farmer, out standing in his field. The farmer heard a tremendous explosion and was knocked over by the shock wave. Arriving with a puff of smoke and a thud, the farmer thought he had

been shot at by artillery, and so he remained flat on the ground for awhile! The meteorite had buried itself, making a hole about 2 feet deep. Weighing about 18kg, the Zagami Meteorite is the largest single individual Mars meteorite ever found. This single meteorite was taken to a museum in the provincial capital of Kaduna, Nigeria and put on display in a museum.

The Zagami Meteorite was classified as a Shergotite, within the family of three types of SNC meteorites from Mars. Each letter denotes the type of meteorite. The S stands for Shergotite, the name given the type of meteorite that fell in 1865 in India, near the town of Shergotty; there are five known Shergotites. The N stands for Nakhrites, named for an achondrite that fell in 1911 in Nakhla, Egypt; there are only 3 Nakhrites known. The C stands for one Chassignite meteorite that fell in 1815 in Chassigny, France.

Shergotite meteorites are fragments of Mars which were blasted into space as a result of large asteroid impacts upon Mars, millions of years ago. These asteroids would have been travelling with a velocity of over 10 km/sec, and thus some fragments with sufficient escape velocity (above 5.4 km/sec) then escaped and migrated to Earth over millions of years. An impact capable of ejecting the Martian meteorites into space would have left a crater of 10-100 km diameter.

Proof that these SNC meteorites came from Mars had to wait until 1976 when the NASA Viking Probes landed on Mars and analyzed the Martian atmosphere. Traces of the noble gases Argon, Krypton, Xenon, and Neon have been detected trapped within tiny gas pockets of the Shergotite meteorites at levels that closely match the proportions in the Martian atmosphere.

Another piece of evidence comes from crystallographic data which gives an idea of when these SNC rocks crystallized. The approximate crystallization ages of the planet's crusts is known. Since the crystallization ages of the SNC meteorites match that of the crust of Mars, Mars is likely to be the origin of these meteors.

Then some years after the fall at Zagami, Robert Haag (a meteorite dealer from Tucson, Arizona) traded for a large portion of the Zagami Meteorite which was cut off, and part of it came to the United States, where it became available on the open market. The Zagami Meteorite is therefore the most readily obtainable SNC meteorite available to collectors. A one pound piece of it recently sold for \$2 million, hundreds of times the price of gold. In fact, a piece of Mars is actually the most expensive commodity on Earth!

So, what does my Zagami Meteorite sample look like. Well, for starters, it is not red. Only the surface of

Mars is red, caused by the oxidation weathering of abundant iron in surface rocks. None of the recovered Martian meteorites are weathered surface rocks; all were sub-surface igneous rocks that crystallized from molten lava, and as such, they are grey or black. My sample is grey.

The total weight of the three fragments is 0.04 grains, or about 0.0000057 pound, yielding a value of \$11.43 at the price of \$2 million per pound. Each of the three fragments have a similar size of 1.0mm x 0.7mm. A 20x magnifying loupe really does show a lot of interesting structure. These fragments do have a somewhat glassy surface as if the material was cooled from a molten state. The appearance is as if globs of "gel toothpaste" fell one on top of the other, then solidified. Thus, there is a lumpy texture, that looks "wet" instead of the "dry" granules in normal rock matrix. The fragments are very brittle; gently handled with tweezers during weighing, I accidentally broke one fragment in two. However, this proved interesting. I was surprised what I saw inside with my 20x magnifying loupe - there was a very miniscule but very bright, shiny nodule of iron-nickel within. However, compared to regular non-Martian meteorites, the Shergotites from Mars have low iron content, and no nickel. How then am I seeing a bright uncorroded metallic nodule? Maybe my "Mars" fragments are not really from the Zagami meteorite after all. Maybe now I'm glad I just won it, and did not have to pay for it! This miniscule finding has left me a bit bewildered!

I always learn something new at our Fall'n'Stars starparty from our guest speakers and our members, and I especially enjoy the chance to socialize. Really, its such a good event that being rained upon or clouded out does not matter. I want to sincerely thank those who work so hard putting together a great starparty... they deserve all the THANKS we can give them! I hope to see even more RASC members attending next year's starparty.

Ken Kingdon,
RASC Kingston



Observing Group Meetings

These are regular meets at the home of members who volunteer their locations and homes to us on or near a new moon. Contact Kevin Fetter if you are interested in hosting a session in 2003. Contact one of the Executive, or the host, for directions or visit the members- only website.

Saturday November 15 at the home of Doug Angle near Sydenham

December : nothing scheduled

For details about the observing certificates, see <http://www.rasc.ca/observing/home.html>

The Messier Certificate Holders (16)

Leo Enright (1982), Gus Johnson (1983), Jim Scotti (1983), Mark Sorensen (1986), Stan Hanna (1990), Steve Manders (1990), Bill Broderick (1993), Dan Rombaugh (1993), Ray Berg (1996), Ken Kingdon (1998), David Pianosi (1998), Doug Angle (1999), Vic Smida (2002), Mark Kaye (2003), Norm Welbanks (2003), Kevin Kell (2003)

The Finest NGC Certificate Holders (5)

Walter MacDonald (1995), Cathy Hall (1997), Leo Enright (1999) Jan Wisniewski (2001), Ken Kingdon (2002)

Messier Hunters

Hank Bartlett (55), Fred Barrett (50), Tom Dean (36), Laura Gagne (76), Kim Hay (19), Peggy Hurley (55), David Maguire (7)

Finest NGC Hunters

Doug Angle (51), Kevin Kell (5)

Exploring the Universe Hunters

Kim Hay (0), Kevin Kell (0)



Public Observing Sessions (POS)

These are the public observing sessions, normally held at Murney Tower Park on the Kingston waterfront on King & Barrie Sts. On the first Tuesday after a new moon.
CANCELLED

The next POS are: CANCELLED

New in the news is that a new collaboration between RASC-KC and the Queen's Observatory will be seeing us hold open houses and observing sessions more often at the observatory itself. If this turns out (and we'll be finding out by the November RASC-KC meeting), we will probably shut down the Tuesday night monthly sessions in favour of using our human resources over at the university.

NEWS FLASH

yep.. An agreement has been reached. Ellis Hall Observatory open houses with observing out on the deck on the 2nd Saturday of the month from 7:30-9:30 First one this Saturday November 8th.



Equipment Loan Program

Members in good standing are able to sign out Centre equipment, including:

- ☆ 25cm (10") f5.5 Douglas Dobsonian Advanced Users
 - ☆ 20cm (8") f7 FitzGerald Dobsonian Intermediate Users
 - ☆ 20cm (8") f4.5 Barney Dobsonian Intermediate Users
 - ☆ 11cm (4.5") f4.3 Bushnell Voyager Starter Users
 - ☆ 11cm (4.5") f7.9 Orbitor 3500 Equatorial Starter Users
 - ☆ 5 barndoor tracking platforms 1999 February - Starter Users
 - ☆ Collimating Tool 2001 August - All Users
 - ☆ Binocular Set #1 B&L7x50 1999 April - Starter Users
 - ☆ Binocular Set #2 B&L10x50 1999 April- Starter Users
 - ☆ Binocular Set #3 Bushnell 7x50 1999 April - Starter Users
 - ☆ Binoculars Set #4 Stem 7x50 1995 - Starter Users
 - ☆ 19mm Televue Panoptic Eyepiece 2000 March - Intermediate Users
 - ☆ Filter Set - ND13, 4 colour, O3 nebula - all 1.25" 2000 September - Intermediate Users
 - ☆ Kodak Ektagraphic 35mm slide projector 2000 November
- Contact Tom Dean at xxxxxxxx

Coming Soon: an *equatorial tracking platform* for Dobsonian telescopes. We've taken delivery of it and now need to sit down with it, write up a manual, test out it's load limits, etc.

The Douglas 25cm telescope is out of commission as it undergoes a refit. After Fall'N'Stars, the primary mirror will be shipped out for a recoating, last done in 1995.



The Kingston Centre of the RASC

The Kingston Centre was founded in 1961.
PO Box 1793, Kingston, On

K7L 5J6

Infoline & answering machine: 613-377-6029

Email:

Web: <http://members.kingston.net/rasc>

We also have an email chat list "rascchat".
Send your email address to Kevin Kell to be added to the RASCCHAT list.

Executive Officers - 2003

President: Hank Bartlett

Vice President: Doug Angle

Secretary: Brian Hunter

Treasurer: John Hurley

Librarian: David Maguire

Editor: Kevin Kell

National Council Rep: Peggy Hurley

Regulus is published 6 times per year on paper and 12 times per year in adobe acrobat format files. Both are available on our web site. Views and opinions expressed herein do not necessarily reflect the official position of the Royal Astronomical Society of Canada or its officers and members.

Subscriptions: Members of the Kingston Centre receive Regulus as a benefit of membership. Advertisements are free to members of the Centre. Commercial advertising is \$20/quarter, \$40/half page, \$100/ full page and should be in electronic format.

Contributions are more than welcome. Submitted material will be edited for brevity or clarity. Copyright 2003 All rights reserved. Permission is granted to other publications of a similar nature to print material from Regulus provided that full credit is given to the author and to Regulus.
November Print Run=200

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

Newsletter Submission Info: The deadline is usually the 3rd Friday of each month. The preferred method of submission is E-MAIL file attachment.
E-mail:

Fax: 1-613-533-2907 (with cover page to Kevin Kell)
Post: RR#1, Yarker Ontario K0K 3N0 Canada

Resources Available to Members:

(See bottom of page 10 for passwords to "member-only" RASC web sites)

- **RASC-Kingston Centre Handbook** at:
<http://130.15.144.99/rasc/secure/kingstonmanual.pdf>

- **RASC National manual** at
<http://www.rasc.ca/private/rascmanual.pdf>

- **RASC-Kingston Centre Loan Program** at:
<http://members.kingston.net/rasc/loan.htm>



Ramblings from the Editor

by Kevin Kell

Annual General Meeting and Elections

The Annual General Meeting is coming up in November and as always, we are looking for people to serve on the Executive of the Kingston Centre. Every year we publish information about the positions and encourage members to ask questions of any of the executive if they are even remotely interested in running in the elections.

There are 7 elected executive positions.

When is the AGM?

"The Annual Meeting of the Centre shall be held each year between October 1 and December 31. At this Annual Meeting, Annual Reports shall be submitted by the President, Secretary and Treasurer. The date of the Annual Meeting shall be announced at least one month in advance and shall be published in the Centre's newsletter."

What happens at the AGM?

The Secretary **shall submit to the Annual Meeting** a report on membership, meetings, and other Centre activities for the preceding year. After the report has been **approved by the Executive Council**, it will be sent by the Secretary to the Secretary of the R.A.S.C. before the 15th day of January in each year.

The Treasurer shall keep accurate records of all subscription fees and other monies received, pay

bills as sanctioned by the Executive Council, and **submit to the Annual Meeting** a report on membership, meetings, and other Centre activities for the preceding year including a statement of revenues and expenses and a statement of assets and liabilities. **These statements shall, after being approved by the Annual Meeting of the Centre**, be forwarded by the Treasurer of the Centre to the Treasurer of the R.A.S.C. before the 15th day of January in each year.

(The above are quoted from our Bylaws, which are just a little out of date!). We usually have all of our Committee Chairs report as well.

After the Annual General Meeting we have elections for the 2004 calendar year.

Article V - Election of Officers

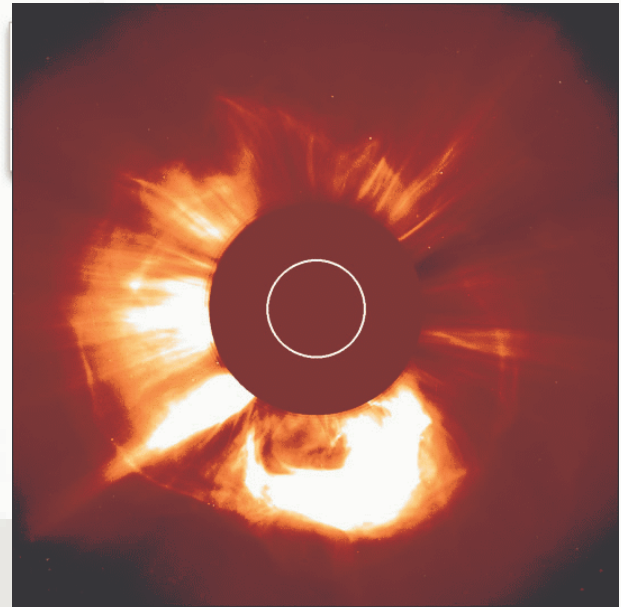
The conditions of nomination shall be:

1. that the person nominated shall be a member in good standing of the Centre,
2. that the assent of the nominee shall have been obtained,
3. that at least two who are members in good standing of the Centre shall make the nomination.

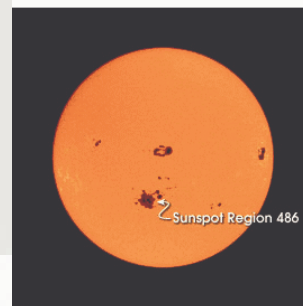
After this point in time, it is the privilege of the new exec to appoint Committee Chairs for the next year. Please contact them if you are interested.

Members Only Website Password Change Effective 2004 January 01

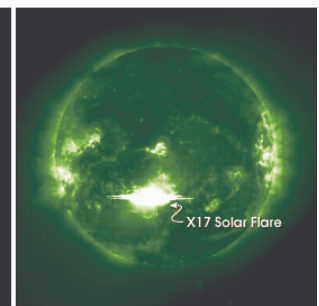
Check the bottom of page 10 for the new password for the RASC-KC Members only website.



11:30 UTC Large Angle and Spectrometric Coronagraph (LASCO)



14:24 Michelson Doppler Imager (MDI)



11:12 UTC Extreme Ultraviolet Imaging Telescope (EIT)

News from the Internet

<http://earthobservatory.nasa.gov/>

A massive solar flare erupted from the surface of the Sun at 9:51 UTC on October 28, 2003. The solar flare persisted for more than an hour, peaking at 11:10 UTC. Associated with the flare was an ejection of a billion tons or more of gas from the Sun's tenuous outer atmosphere, or corona. Both the flare and the coronal mass ejection accelerated electrically charged particles to very high energies and hurled them at near the speed of light directly toward the Earth. It takes light roughly 8 minutes to travel from the Sun to Earth, and these particles made the trip in less than an hour. NOAA is predicting that the coronal mass ejection will hit the Earth's magnetosphere sometime early tomorrow (Oct. 29), probably at or before 12 noon UTC. (Click to visit the NOAA Space Environment Center's Space Weather Web site for more details.)

The images above show the event from the perspective of three different satellite sensors. The top image was acquired by the Large Angle and Spectrometric Coronagraph (LASCO), aboard NASA's Solar and Heliospheric Observatory (SOHO) satellite. In the center of the image is an occultation disc, which allows the sensor to focus on the scattering of light from the Sun's surface off the

free electrons in the Sun's corona. This light appears as the orange halo seemingly radiating outward from the Sun. (The white circle on the occultation disc shows the actual size and location of the solar disc). Note the bright white features extending from beneath and to the left of the Sun. These are today's coronal mass ejections, which appear to be heading directly toward the Earth.

2003 RASC-KC PUBLICATIONS ORDER FORM

Item	Price per unit (Shipping and taxes included) Regular (Member)	Quantity	\$ SubTotal
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