



Regulus



The Newsletter of the RASC Kingston Centre

2001 January-February

40 Years Ago : Organizational Meeting, Kingston Centre

Submissions from Members

This Observatory is a STEEL

by E. Kliptik

About 20 students and members of Queen's University Faculty met in room 221 of Ellis Hall on **Thursday January 19, 1961** at 7:30pm. The chair was taken by Dr. A. Vibert Douglas, Professor of Astronomy, and a past-president of the Royal Astronomical Society of Canada, who outlined the history and purpose of the RASC. After presenting a description of the Handbook and the Journal of the Society and mentioning the annual fee as \$5 per year with a special rate of \$3 per year for students, the chairman called on Dr. George Harrower to explain the facilities of the Observatory. He suggested that members might be invited to observe with the large and the smaller telescopes one evening a week with the guidance of a graduate student in Astronomy. From time to time public lectures might be arranged. After most of those present indicated their desire to form such a Centre and join the Society, the chairman gave an illustrated address on Telescopes and the Universe They Reveal. After the lecture, 9 of those present paid the membership fee and a tentative announcement was made of an informal observational meeting to be held in the Observatory on Thursday January 26. The meeting then adjourned.

2001 will be the 40th anniversary of the Centre and we've been giving some thought on how to celebrate it throughout the year. If you have any ideas, contact the executive. We'll make note of it at the January meeting but in all likelihood the events will be later on in the year with nicer weather!



Hey, the lawnmower can sit under a tarp. There are more important uses for that steel shed in your backyard. Sometimes you just have to get

focussed and get your priorities in order.



"I need an observatory!" I said to myself. Being by nature both cheap and lazy I set out in search of an inexpensive and easy idea. I had seen a

couple of talks by Saturday carpenters who had built wooden observatories, even under \$500.00 (although a considerable dollar value of scrounged material was used to attain this goal). I can bang nails and thumbs with the best of them, but it just seemed to me to be too much work and maintenance. I HATE PAINTING!



Then a thought crossed my mind one night like a blazing fireball, fortunately it left a smoke trail so I could remember the details.

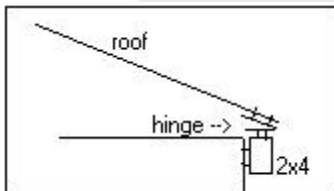
What about a steel shed? There has been a steel 5' x 7' shed in my backyard for twenty years and although the paint has faded there has be no maintenance. OK, you got me, I don't get the lawnmower out that often. The point is here that

the weather has not decreased this building to a useless pile of chipboard rubble.

I began making head plans, I'm not much for notes. Over a period of a few months I shared my ideas with some knowledgeable friends, learned some, picked up some good ideas and refined my design. In the end I have a \$450.00, 8' x 7' observatory. The only change I plan is to make is to add 3.5" of P.T. 2x4 around the bottom in the spring to give just a little more headroom when closed up and making notes etc..

I am sure by now I have your curiosity. What was needed above and beyond normal installation requirements for this conversion from shed to observatory and what had to be done?

50 - #10 3/4 bolts and nuts.
150 - fender washers.
2 - 72" piano hinges
80 - # 8 x 1" wood screws
2 pkg. - 3/16 x 3/8 x 17' weather-stripping
2 strap hinges
4 - P.T. 2 x 4
A few misc. screws.
1 - 7 1/2 ft. x 6" length of flashing (roof cap)



Above is a simple drawing of the roof hinge area. The roof is a little awkward at first but with practice opens easily.

The modification is simple (how structurally sound remains to be seen after the first winter) and it seems stable. Corner brackets could be added but they do not appear to be necessary. Build as per instructions until you reach the roof. Build the roof but leave it in two halves. Attach a hinge along each eave (use bolts with fender washers on both sides of the roof metal) of the roof and matching length of P.T. 2x4 to the other side of the hinge (wood screws and fender washers). CAREFULLY place half of the roof on the walls. The 2x4 should rest just like an eave trough against the wall, screw it to the

wall from the inside with wood screws and fender washers. Repeat for the other roof half. Without going into great of detail a couple of latches and some flashing later and you now have an observatory. 1/2, 2x4 is attached to each roof panel to serve as both a handle and a leg.

So far this design has survived high wind and rain without leaks or shifting. Pins through the roof rails and the wall top sills should give enough stability for snow load. If you try this design build it to your own safety specs I make no claims as to endurance at this point. Be cautious and if in doubt about the style of shed you buy, build extra strength in. Good luck and "Share the View."

ASTRO SPEAK

What we say: Yes, the premium apo refractors are well worth the money. **What we mean:** (A) My spouse has no idea what I spend on astro gear, or (B) We have no children in our household.

What we say: Well, yes, with a little work that Tasco you have can make a decent starter scope. **What we mean:** I feel your pain.

What we say: I live in a moderately light polluted area.

What we mean: I'm about ready to go on a rampage and shoot out all the street and flood lights within 10 miles.

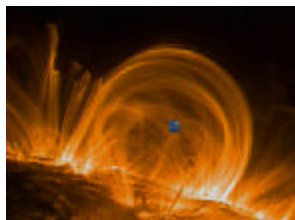
What we say: If you dress properly, cold weather observing is no problem. **What we mean:** I haven't lost any fingers or toes to frostbite yet.

What we say: This small apo gives the ultimate razor sharp, high contrast views. **What we mean:** I'm not industrious enough to set up a big dob, but this thing sure was expensive - aren't you impressed?

What we say: Yes, it takes a few minutes to get set up, but the views through this big daddy dob are unbelievable. **What we mean:** This behemoth has finally worn me down. Wanna buy it?

What we say: I can't quite make out the spiral arms in that galaxy. **What we mean:** Where's the galaxy? My night vision died ten years ago.

Solar Winds by Steven Manders

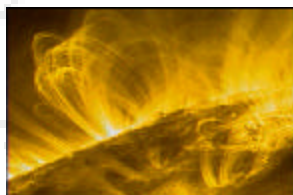


In the January/February 1997 issue of Regulus, I reported a possible cause of solar winds, and explanation for their high temperatures and velocities. I attributed them to Magnetic Chimneys. These chimneys

are a product of magnetohydrodynamics where by the intense magnetic fields of the sun interact with the hot plasma. The magnetic field can be thought of as a sail of a boat, and the plasma as the wind. Normally the wind cannot blow through the sail but it can push it around. However, with enough force, the plasma does penetrate the vertical compressed magnetic columns and generates enormous heat in the process. The heat generated is directly related to the pressure drop of the plasma penetrating the magnetic field. The heated plasma rises up the chimney. Which typically reach several hundred thousand kilometres deep. This compresses the chimneys into tight magnetic bundles which also act to guide the very hot gases up and away from the sun. These are apparent during solar eclipses. Plasma may flow along a magnetic field without resistance, but it can only cross it with great resistance. That is the source of the very high temperatures and ultimately the source of propulsion of the winds. To date, no other source of the high temperatures or propulsion has been adequately proposed for solar winds.

On September 26, 2000 (press release <ftp://ftp.hq.nasa.gov/pub/pao/pressrel/2000/00-146.txt>) (web site: <http://www.gsfc.nasa.gov/GSFC/SpaceSci/sunearth/tracecl.htm>) it was reported in the National Post that NASA has taken some high resolution pictures in ultraviolet light, which have revealed that the jets of wind have their highest temperatures of about 2 million degrees kelvin just as they leave the solar surface, which is only 5,538 degrees. This solves the question, did the wind heat up above the atmosphere buy some unknown process, or did it start out very hot. It starts out hot and fast. Futhermore, if it simply originated very deep inside the sun where it is that hot, adiabatic cooling would have cooled any such material long before it reached the surface.

This finding further supports my hypothesis that it is magnetic chimneys that heat the plasma to millions of degrees, guides and accelerates t to velocities reaching a million kilometres per hour. It is also consistent with the computer model of the process I wrote in 1997.



The Mathematics Behind the Barndoor by Hein van Asperen

The September October (2000) issue of Skynews gives some information on the construction of a barndoor platform. The details are supplied by two members of the Kingston Centre of the RASC. It is claimed that adequate astrophotos can be made with a focal length of 50mm or shorter and exposure times of 5 minutes. In the following analysis I will show that the performance can be improved by making some small changes.

The distance between the centre point of the hinge and the hole that contains the drive bolt is critical. It is not mentioned but I think it is implied that the same distance is used for the contact point of the other endo f the drive bolt. And here it is possible to make improvements.

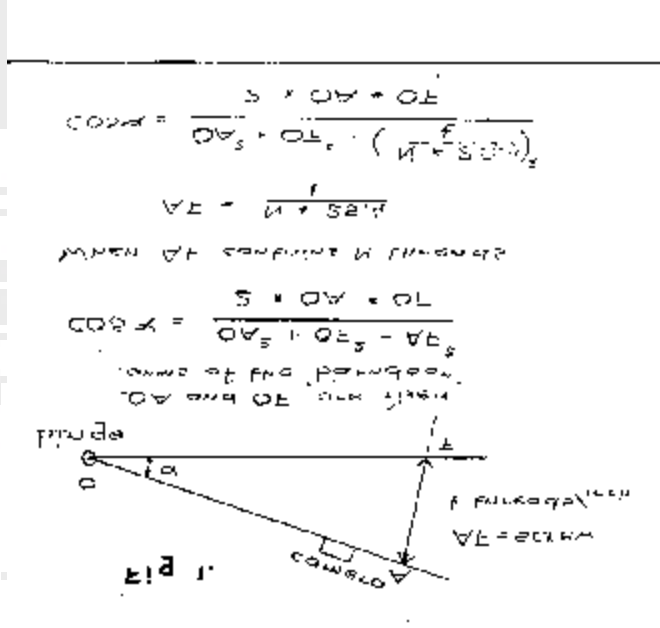
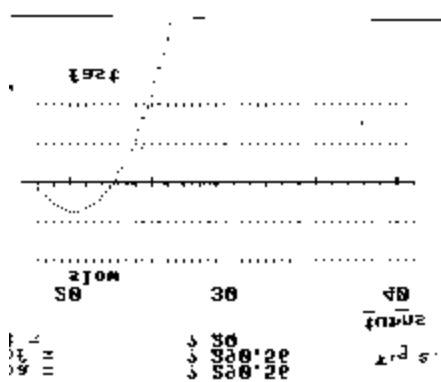


Figure1 shows the arms of the platform and the basic equation that controls the movement of the arm which supports the camera. The idea is that one turn of the screw changes the angle *alpha* between the two boards exactly the amount that the earth rotates against the stars. The “AF” part of the Cosine rule contains the variable N (the number of threads covering the distance AF). The cosine varies and therefore the angle *alpha* is only at one point equal to the earth rotation. With the file “platang12.bas:” we can calculate the required

length of the arms for a particular distance of AF expressed in N. At the start of the exposure time the boards are almost closed and I assume the distance AF=1 inch (with a bolt of 20 threads/inch: N=20). With the program platangl2.bas we find that with a distance of 290.56 mm the angle *alpha* equals the earth rotation. This is very close to the distance given in the Skynews article. The value 11 and 7/16 inches equals 290.5125 mm.

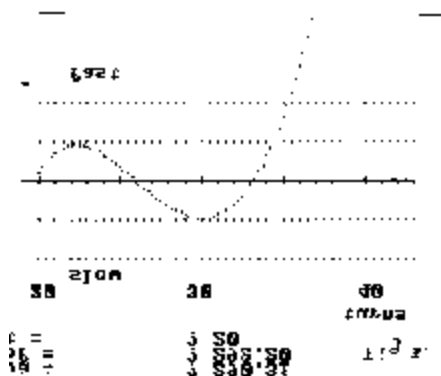
The file "plat2.bas" calculates the error between the platform movement and the earth rotation. The sum of the individual errors is the total error and is plotted on the graph. For Figure 2 the total error is calculated when N changes from 18 to 45. The scale is an error of 0.0001 degrees or



0.36 arc-seconds per division. With the experience that a 5 minute exposure (with a 50mm focal length lens) give

adequate results, we conclude that an error of -0.0001 to +0.0001 degrees is acceptable. If we want to improve the exposure time and allow a longer focus length we must stay within the same error.

When we use the same file (program) and change by trial and error the arm distances, and allow different values for the two arms, we see that the form of the curve changes. When the



arms are respectively 290.31 and 292.20 mm, the error line makes first a sinus like movement and finally too goes outside the error limit, but we now have almost 15 minutes permissible exposure time (Fig 3).

My experience with a platform based on this change is that I get very good results with a lens with 200mm focal length (1:4) and exposure times of 10 minutes (on Ilford Fp4) as demonstrated by a photo of the belt of Orion. The two bright stars at the top are Alnilam and Alnitak. When you hope for similar results you should remember that the hinge of the platform must be directed to the celestial Northpole and not to Polaris. The difference is not great, but sufficient to form a trail. That means that if you get a trail, do not blame the mathematics, but investigate if the hinge is not properly directed to the North pole. This is easily checked by discontinuing the exposure after ten minutes guiding. That means you stop the guiding and then expose for an extra minute. If the trail caused by the stopping the guiding is in the same



direction as the drifting caused by inaccurate guiding, then the guiding is at fault. If the drift and the trail form an angle, the inaccurate direction of the hinge is the cause. How I solved that problem will be the subject of an other article.

I have to stress that the two contact points of the screw

AF must be firmly positioned on the boards. I solved that by filing the end A of the screw to a sharp point which fits in a conical hole on arm OA. The wings of the wingnut are filed down to a sharp edge, which rests in a groove mounted on the other board. The hole and the groove are in a metal strip that can be adjusted to and from the hinge. It seems complicated to make the two arm lengths

exactly as stated, but it is not more difficult than making both arms exactly 11 7/8" inches.

In case you want to use a screw with more threads per inch you can use file "platang2.bas" for a rough estimate of the new arm lengths. The product of the armlength and number of threads is constant. My platform uses a screw with 32 threads per inch. With the initial value for AF = 1 inch, the distances OA and OF are 181.88 mm. Then you have to play with "plat2.bas" to arrive at the sinus shape.

(Ed Notes: The programs are not included in the newsletter but will be available online the website).

News From Away

Paul Boltwood of the Ottawa Centre, has won the 2000 Amateur Achievement Award of the Astronomical Society of the Pacific. It was for his very serious work in CCD imaging, especially his winning the Sky and Telescope award for imaging the faintest object, a mag.24!!!! object, as explained in an article of about 10 months ago in the magazine.

YOG

by Hank Bartlett

Parents are encouraged to attend and share this hobby with their child. Parental attendance also allows the parent to learn enough about astronomy to allow them to help their child at home. As this is basically an after dark hobby it is best to that children are not left alone, but also it is fun to share this experience with them.

Meetings in 2001:

Wed January 17th (the school is closed on Jan 3rd)

Wed Feb 7th and 21st

For more information call Hank at xxx-xxx-xxxx or email xxx@xxx.xxxxxxxx.xxx .



SETI@Home update Version 3.03 adds more science processing, slowing down times by almost 1/2. (released in early December 2000). A side effect of this is to reduce the number of

computers trying to send and receive units from the main server, as it continues to be overloaded.

Notes from the Secretary

Regular Meeting of the Kingston Centre of the RASC Friday November 10th, 2000 -

The November 10th meeting was our Annual General meeting reserved for elections and members presentations. This is how the elections turned out.....

President: Laura Gagne, acclaimed

VP: Paul Winkler, elected

Secretary: Susan Gagnon, acclaimed

Treasurer: John Hurley, acclaimed

Newsletter Editor: Kevin Kell, acclaimed

Librarian: David Maguire, acclaimed

National Council Rep: Tom Dean, acclaimed

Secretary and Treasurer reports were tabled and accepted. **Doug, Kevin, Laura, and David M.** all gave brief reports and after a short break there were 3 door prizes....winners were: wine, **David Orenstien**, 50/50, **Kendra** and a pen laser, **Tessa**. Members presentations began with a visitor, **David Orenstien**, Chair of the National Public Education Committee. David gave us the rundown on what the committee has been doing including , a website, observing projects, educators newsgroup, making contact with teacher's unions and promoting various RASC publications as basic resources. **Ken Kingdon** showed us a trick he uses to keep his eyepieces from dewing up. He puts them in plastic containers, labeled with fluorescent tape and carries them in a fanny pack designed to carry water bottles. Worn under his coat they stay warm and dew free. He also suggests fixing your flashlight to a velcro headband to free both hands. **Ken** has learned lots of tricks working on his finest NGC list. **Kevin Kell** talked about current publications. The ETU was in its 4th printing, Worlds to Discover, the Grade 6 book has 24 in class projects and more observing activities for parents and teachers. There is a plan to put an ATM project book together. It would contain diagrams for observing tables and chairs, power boxes, and possibly backyard observatories. It may even be ready for summer. **Hank Bartlett** had slides of his new observatory, constructed from a modified garden shed. Hank is enjoying observing and the \$\$\$ he saved. **Leo Enright** had his own version of quick time movies with a set of slides from last August and September of Uranus. The star field was quite rich but flipping back and forth allowed us to spot the faint planet as it moved from date to date.

Jan Wisniewski had some great aurora photos from early October. **Susan Gagnon** had some first time with the telescope slides and had a few sun spots and a lot of bad weather. **Tom Dean** gave us the scoop on the new scopes

picked up at Costco and what modifications had to be made. New eyepieces and some adjustments seemed to produce good scopes for the price and they are now in the loan program. **Kendra Angle** announced that the ATM stuff that needs to be constructed is listed on the website. You can check to see what you can do and get supplies from Kendra. **Christine Kulyk** had an assortment of books for sale at very reasonable prices. The meeting was adjourned to Harvey's.

Regular Meeting of the Kingston Centre of the RASC Friday December 8th, 2000 -

The Meeting was called to order at 8 p.m. by **Doug** who was presiding over his last meeting as 2000 President. **Doug** introduced our speaker for the evening, centre member **Jan Wisniewski**, who spoke on Homebrew CCD Imaging. It was a great talk and Jan gave us some insight into what it takes to get those great pictures. There were plenty of questions.

After the talk, **Doug** gave out his President's appreciation awards to those who did not make the Banquet, **Laura** was recognized for her continuing efforts in education with the production of the grade 6 book *Worlds to Discover*. **David Pianosi and the Belleville Astronomy Club** were recognized for the efforts made to put on the 1st annual DSNOS event that was so enjoyed.

Doug also announced that at the Banquet the A.V. Douglas award was given to **Hank Bartlett** for all the hard work with the YOG, running draws at every meeting, and countless other year long contributions to the Centre. There was a short break followed by the draws, wine supplied by Hank was won by Steve Manders and Hank won the 50/50. The Secretary asked all to make sure that they signed the attendance sheet and encouraged all to have a look at the newsletters from other centres that will be placed in the library. The mail had been busy with orders and several new memberships.

Laura commented briefly on Education and that the new books were being sold, always with new editions in the future, (this committee does not lack commitment to carry though!). **Laura** announced the new VP Paul Winkler and **Paul** announced that the next meeting will be short presentations by members and the only formal sign up so far was Steve M. so all others should notify Paul so he can fit you in.

Newsletter Ed., Kevin gave the next Regulus dead line as December 15th. Jan said that he was changing his CCD night to the 3rd Saturday of the month so the next get together would be December 16th.

Hank reported that the YOG had little news aside from the fact that the 1st session of 2001 was cancelled because the school would be closed.

Tom reported that there were no Public or Centre sessions planned around Christmas and that he was looking for a host for the members session in January.

Miscellaneous and Observing

In aid of Education schemes Tom showed some quick time movies that have been put together from *Starry Night* which can be used on the website (small files) and larger files for a possible CD. Kevin unveiled the Centre's new slide projector and showed some meeting and banquet pics. Steve M. reported on his observations of recent shuttle/space station viewing. Jan reported that the Geminids were already active. Susan reported that she bought well insulated pants at S&R for \$40. The meeting was then adjourned to Harvey's.

Notes from National

October 14th was my last meeting as your national Rep and I must say that it has been very enjoyable. All reports are available on the RASC website and not that painful to read, so I will attempt to relate the highlights.

In the Presidents report Bob Garrison told us about a round table discussion in which he participated earlier this month. The purpose of this get together organized by the Secretary of State for Science, Research and Development, was to explore the need for a National Academy of Science. There were over 100 people in attendance. The discussions were very interesting. As is the case with so many government initiatives it was decided that it was a great idea but there was no money to do it because it was estimated that it would take a billion dollars to make it independent.

Bob also encouraged people to speak with their MPs regarding the Long-Range Plan since his experience has been that the LRP is very well received.

Prince George has also contacted the RASC to ask about becoming a centre.

Kim, as National Secretary announced that the Manual is updated and on the website.

Michael Watson our Treasurer informed us that the 2000 fiscal year will end with a deficit and promotional items are not doing that well. He also said that there was no sign that the gradual increase in membership trend will change.

There was a major discussion about membership fees and one possible scenario is to get rid of the 60/40 split and have all fees listed separately. This way when there is a fee increase to cover expenses at the National level it would be reflected in that portion only.

Colin Haig spoke for Computer Use and in addition to working on virus protection, he presented a proposal for linking the publications and membership sales to the website

so people can order products and even sign up on line. Colin is also Librarian and trying to find ways to utilize this great resource.

The Publications report was quite lengthy and interesting. In an effort to cut costs the Annual Report will probably look quite different. A web version of Looking Up is being looked into. There may also be a few copies that were not destroyed and Dundern Press is trying to track them down. Motion 00411 and Motion 00412 are self explanatory and listed in the November/December Regulus. These deal with providing a better source of reviewed/recommended astronomical publications. It is a service as yet to be covered by a group like RASC and there is a chance for some money to be made from the Chapters and Amazon links. The committee is also interested in becoming more involved in promoting the Calendar and will look into approaching a few selected retailers in person. The distribution of the Observers Handbook is also under review.

We had a chance to meet Wayne Barkhouse, the new Journal Editor in Chief. Wayne is committed to getting the Journal out on time, getting more research papers and getting the articles that are overdue from medal winners. Watch for a new Editorial team structure in the next Journal.

The 2001 OH was passed around and everyone was very impressed.

Leo reported steady sales of the BOG, but not due to the commercial distributor. Hushion House seems to lack basic math skills and it sounds as though we should threaten to send in David Orenstien.

Light Pollution Abatement is updating their website and would like to receive articles and images from members and non members. Single paragraph anecdotes would be appreciated. The report is worth reading if you have an interest as it contains several references to municipal lighting issues.

The New Observing Certificate committee is still looking for feedback on the object lists presented the 2000 GA.

Public Education continues to concentrate on public and high school students and assisting teachers. The plan of attack includes a partnership with teachers unions, observing projects for the school year and an Astronomy Educators Electronic Newsgroup. Draft letters and a draft article for Canadian teachers' publication were also presented.

Randy Attwood reported that the Award Committee would like to receive input for NCR and Centre Councils for the service and long standing members awards. Should

longevity awards be generated by National and should service awards be generated by Centres. A motion was passed that the Awards Committee be authorized to spend \$1100 for participating in the 2001 CWSF, which will be held in Kingston. (\$500 to register and \$200 x3 for prizes.)

Membership and Promotion chair Kim Hay reported that there will be a new ad in the Nov/Dec SkyNews and the Promotional Webpage has been updated. A youth page is in the works and general membership is asked to speak at public functions and write MPs to raise the profile of Astronomy in Canada.

The Nominating Committee reported that there are two vacancies in the honorary member category and members are encouraged to submit suggestions to the nominating committee.

London reported that all is well underway for the 2001 GA and we were all given flashy brochures to take home.

Montreal has taken on the 2002 GA and it will be held on the Victoria Day weekend in May rather than July 1st.

<http://www.store.rasc.ca/>

At the October council meeting, council voted in favour of initiating the RASC's use of e-commerce in a modest way. As a result, we now have an on-line eStore where the internet community can:

- purchase our publications
- join the society
- renew existing memberships

We hope that this new store will increase our publication sales, but will also streamline the renewal of memberships (if you are currently lapsed and renew this week, you will make the December JRASC/SkyNews mailing!)

If you have any technical problems with the store, please let me know so we can resolve any problems before advertising the store more generally outside the RASC community

Regards, Dave Lane, on behalf of the Computer Use Committee

Editor's Corner

by Kevin Kell

Web site Password:

Due to a slight distraction caused to yours truly during the packaging (folding, stuffing, etc) of the last issue of *Regulus* (2000 Nov/Dec), I neglected to remove the bookmarks and web site passwords to those newsletters sent out to non RASC Kingston Centre mailings (and we have about 35 of those). Quickly the next day (after they had all been mailed out) I realized the error and changed the site password to a completely new one effective Friday November 10th. We normally change it every calendar year in any event so it was, in one way of looking at it, only a couple of months early.

Welcome new members:

Kelly Foyle (Student) Queen's University
 Tammy Dawn Gibson (Regular) Kingston

Slide Loan Sets:

To remind you that we have a large selection of 35mm slide that can be loaned out to members for use in giving public talks, talks to schools, etc.

And we forgot to mention three of our own!

Expanding Their Universe Set #1 (40 slides)

Expanding Their Universe Set #2 (40 slides)

Worlds to Discover Set #3 (20 slides)

We have also taken the 170+ slides donated by members and sorted them according to topic into 13 sets. This should make it easier to set up a talk and locate the slides you need.

Name	Last status	recent adds	Current	Total
Tom Dean	36	0		36
Laura Gagne	65	0		65
Peggy Hurley	55	0		55
Kevin Kell	51	0		51

OK, what's up with the rest of you?? Haul out your logbooks and do a count... Gotta get that competitive spirit up and running to get you motivated to get up and outside!

What's New on the Web?

<http://www.rasc.ca/kingston>

For your info: three Centres have recently changed their websites. Here are the new URLs:

Montreal: <http://www3.sympatico.ca/g.angers/rasc/>

Regina: <http://www.ras.sk.ca/>

Saskatoon: <http://prana.usask.ca/~rasc/>

These have all been updated on our Kingston Centre Site.

Education Group News

We've sold out of slide sets #1 and #2 and are in the process of getting more sets created. Similarly the *Expanding Their Universe* (Grade9) book has sold out again and we are doing our 5th print run.

ATM Group News

Nothing submitted this issue.

CCD Group News

The meetings have been changed from the 3rd Friday of the month to the 3rd Saturday of the month, effective from December 2000 onwards. The location remains the same at the home of Jan Wisniewski just northwest of Harrowsmith.

Public Observing Sessions

Our monthly Public Observing Session is normally held "about the first Tuesday after a New Moon". The sessions generally start with setup around dusk (in the summer, in the winter it's early evening, after dinner) and run for an hour or so and are held at the Murney Tower Museum Park (King & Barrie Sts) in Downtown Kingston

Tuesday January 30th (6 days old)
Tuesday February 27th (4 days old)
Tuesday March 27th (4 days old)

RASC Kingston Centre Meetings

The Kingston Centre RASC meets once a month on the 2nd Friday of each month at 8:00 pm (20:00) in Mackintosh-Corry Hall, Room B-201 on Queen's University Campus **unless noted otherwise.** We have adopted a policy of moving any meeting that is held on a holiday weekend to the **WEEK BEFORE.**



Event Horizon 2001

- ! **Friday January 12th** Regular Meeting
Member's Night presentations
- ! Friday February 9th
- ! Friday March 9th
- ! **Friday April 6th** Guest Speaker: Alan Ward (Moonward Optics) (tentative)
Topic: TBA
- ! Friday May 11th
- ! **Friday June 8th** Guest Speaker: Terry Dickinson (Skynews) (tentative) Topic: TBA
- ! **Friday July TBA** Guest Speaker: Richard Schmude (Kingston Centre) (tentative) Topic: TBA

- ! Friday August 10th No regular meeting - Annual Markfest BBQ
- ! Friday September 14th
- ! Friday October 12th
- ! Friday November 9th
- ! Friday December 14th

Other Special Events: StarFest August 16-19

2001 Officers and Executive Council

PO Box 1793, Kingston, On K7L 5J6
Infoline & answering machine xxxxxxxxxx

- President:** Laura Gagne
- Vice President:** Paul Winkler
- Secretary:** Susan Gagnon
- Treasurer:** John Hurley
- Librarian:** David Maguire
- Editor:** Kevin Kell
- National Council Rep:** Tom Dean

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 Tom Dean if you are interested in hosting a session.

- 2001 January: TBA**
- 2001 February: TBA**
- 2001 March: TBA**

Check the main web page for the latest info!

Equipment Loan Program: The GPS receiver that was on loan has been returned on request to it's owner. Thanks for the use Kevin Fetter!
We now have our very own **Kodak 35mm slide projector.** It is stationed with the slide set loan collection and Hank Bartlett and can be signed out on it's own or with some of the slides.



RASC
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Box 1793 Kingston
Ontario K7L 5J6

Infoline:
613-xxx-xxxx
Web Page
[http://www.rasc.ca/
kingston](http://www.rasc.ca/kingston)

Secure Web Site
As of 2000 Nov 10
(case sensitive)
userid: xxx
password: xxx

2001 January

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

January February Run=200

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

Newsletter Submission Info: The deadline is the 3rd Friday before regular meetings in odd numbered months. The preferred method is E-MAIL, then disk, lastly paper.
 E-mail: <kell (at) cliff.path.queensu.ca>
 Fax: 1-613-533-2907 (with cover page to Kevin Kell)
 Post: Box 2033 Kingston Ontario K7L5J8 Canada ascii or most major word processors (Corel WP8 for windows preferred) via E-mail or 3.5" PC floppy disk

Kim's Kingston Kosmic Kalendar

Prepared by Kim Hay

1 st Quarter Moon		Jan 2, 2001
Quadrantid Meteor Peak		Jan 3, 2001
Full Moon		Jan 9, 2001
Total Lunar Eclipse		Jan 9, 2001

3 rd Quarter Moon		Jan 16, 2001
New Moon	DARK SKIES	Jan 24, 2001
1 st Quarter Moon		Feb 1
Full Moon (Largest of 2001)		Feb 8
3 rd Quarter Moon		Feb 15
New Moon	DARK SKIES	Feb 23
1st Quarter Moon		March 3
Full Moon		March 9
3 rd Quarter Moon		March 16
Spring Equinox		March 20 (8:31 am edt)
New Moon	DARK SKIES	March 25

See the RASC 2001 Observers Handbook and Calendar for more info.



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