

Regulus

November 2009
RASC Kingston Centre



Upcoming Meetings

Monday, November 2, 2009
8:00 p.m.

CAVE Public Lecture:

Dr. Neil Turok of the Perimeter Institute:
What Banged?
at Stirling Hall, Theatre D

Friday, November 13, 2009
7:30-9:30 p.m.

Annual Meeting & Movie Night
at Chernoff Auditorium
(located next door to Stirling Hall)

Friday, December 11, 2009

Raymond Francis, former member of ESA:
**A Perspective of Space Programs
Beyond North America**

Friday, January 8, 2010

Members' Night 7:30-9:30 p.m.

Meetings are held at 7:30 p.m. at Stirling Hall Theatre "A" on Bader Lane at Queen's University in Kingston, Ontario. Our meetings are co-sponsored by the Queen's Physics Department and include astronomy lectures open to the public. ★



KAON Public Observing

Saturday, November 14 7:30 p.m.
Speaker: Stephan Courteau

Saturday, December 12 7:30 p.m.

Saturday, January 9 7:30 p.m.

KAON (Kingston Astronomy Outreach Network) sessions are held at Queen's Observatory on the 4th floor of Ellis Hall. ★

Other Events

Saturday, November 14
10:30 a.m.-3:00 p.m.

History of Astronomy Jamboree
at Chernoff Auditorium
(located next door to Stirling Hall) ★



Pictures from the IYA public lecture on Monday, October 26th at Queen's University. William Harris of McMaster University (top left) spoke on "Galileo, Shakespeare, and van Gogh: Creative Reactions to the End of the World." Stephan Courteau (bottom right) of RMC was the MC for the evening.

KC Annual Meeting & Movie Night

RASC-KC 2009 Annual General Meeting Friday, November 13, 2009

AGENDA

1. Approval of the agenda.
2. Consideration & adoption of the 2008 Annual General Meeting minutes.
3. Consideration & approval of the reports of council.
4. Presentation & adoption of financial statements.
5. Centre Elections — slate proposed by nomination committee.
 - *President* — 2 year term, 2009-2011
 - *Vice President* — 2 year term, 2009-2011
 - *Treasurer* — 2 year term, 2009-2011
 - *National Council Representative* (vacant) — 2008-2010
6. Election of auditor.
7. Other business.
8. Adjourn meeting.
9. Movies/videos (TBA).

Web Link Kingston Centre Annual Report 2009
kingston.rasc.ca/Secure/AnnualReports/2009.php

More info at kingston.rasc.ca

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KAON Report: October 10

Susan Gagnon

THE WINTER HOURS FOR KAON have begun and the door to the deck opened at 7 p.m. for setup and public viewing, 7:30 to 9:30. The evening began with very promising skies and a bright Jupiter in the southeast, but a patchy cloud cover soon developed. Jupiter never really left us but maintained a mysterious beacon-like presence that only seemed to further enchant patient observers.

The warm room was packed and the public enjoyed a talk on the Galilean Moons by RASC member **Brian Hunter**. Tours of the dome were carried out.

There were a total of 71 visitors to the roof and most seemed to enjoy themselves, some regulars and some new folks. There was a couple who

came from Port Hope for the weekend just so that they could come to the open house.

RASC volunteers were **Steve Hart, Kim Hay, Kevin Kell, Susan Gagnon, Brian Hunter, David Maguire, and Hank Bartlett**. Queen's University was represented by **Stephan Courteau, Joel Roediger, and Terry Bridges**. ★



Regulus Needs You!

Items of interest from members—full articles, or even just a couple of paragraphs are always welcome. Items are gratefully accepted on each and every day of the year! Send items to:

walter2 (at) starlightccd (dot) com
or:

Walter MacDonald
PO Box 142
Winchester ON K0C 2K0

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President:	Kevin Kell
Vice President:	Susan Gagnon
Secretary:	Steve Hart
Treasurer:	Kim Hay
Librarian:	David Maguire
Editor:	Walter MacDonald
National Council Rep:	<i>vacant</i>

2008-09 Committee Chairs/Coordinators

Astronomy Day:	Kim Hay
Amateur Telescope Makers:	<i>vacant</i>
Awards:	Kevin Kell
Banquet:	<i>vacant</i>
Education:	<i>vacant</i>
Equipment Loan:	Kevin Kell
Fall 'N' Stars:	Kim Hay
KAON:	Susan Gagnon
OAFN Instructors:	<i>vacant</i>
Observing:	<i>vacant</i>
Publicity:	<i>vacant</i>
Relay for Life:	Kim Hay
Responsible Lighting:	Kim Hay
Webmaster:	Walter MacDonald

THIS WILL BE MY LAST COLUMN as President of the RASC Kingston Centre as my two-year term has come to a close.

You will be able to read my President's Annual Report online in the members-only section of our website, <http://kingston.rasc.ca/Secure/> along with reports from other board members and committee chairs. The members-only section access password is mentioned in my monthly e-mail that I send out to all of you with e-mail addresses near the start of each month.

It has been tiring and I look forward to devoting more time to the enjoyment of the hobby itself (i.e. observing) rather than the administration side. There are some long-delayed projects that have basically "stalled" for lack of a better word, that I hope will come along over the next few months.

The board of directors met again in late October and reaffirmed the concept of shifting away from public outreach after a very successful **International Year of Astronomy** and towards more services to members, including we hope, a number of observing group sessions. Don't forget about the **50-in-50 Challenge!**

We continue to cut back on expenses in these hard financial times, and the next item we will see leave is the telephone hotline, in use for the past seven years now.

Calls to the Centre's **hotline** have continued to decrease over time to the point of just a few calls a month. Our recently passed budget for 2009-2010 includes this and other cutbacks as our income has taken multiple hits including lower interest rates on investments, much lower donations to the Centre and much less extra-curricular fund raising activity.

We have also taken a member's suggestion to name our Frontenac, Lennox & Addington Science Fair

prize in honour of **Leo Enright**, and bumped up the prize amount to approximately \$100 in value, comprised of a copy of the *Beginners Observing Guide* with a cash prize.

As the rest of 2009 winds down, we will have some 2010 **RASC Calendars** available for sale at the November annual meeting (see the treasurer's report on page 4 for more information). That was a subtle reminder of the **Annual General Meeting** (AGM) and elections on Friday, November 13th. As in past years, we hope to have the AGM done and over with as quickly as possible and move on to a more free-form meeting to see some short videos, and to talk about the centre and what your ideas are.



Our *enterprising captain* president, Kevin Kell, at Vulcan in August 2009.

After the elections, the new board will meet in the near future, plot out a strategy for the upcoming year, and be on the lookout for volunteer committee chairs.

Note that we will be in Chernoff Hall (Chemistry) Auditorium right next door to Stirling for this meeting (due to a room conflict).

Thanks to all those on and off the board for contributing to the operations of the Centre in various ways over the last two years. ★



ACTIVITY CONTINUES TO DECREASE with the equipment loan program. In the last 12 months there have been less than a dozen pieces signed out, most notably the data projector and slide screen for talks, the SQMeter, the 19mm and 31mm eyepieces and the Douglas 25cm telescope.

With this level of activity and the sheer amount of space required to store the items, and the lack of a permanent home in the form of a warm room/storage shed, we may want to start considering selling off some of the items instead of constantly accumulating more.

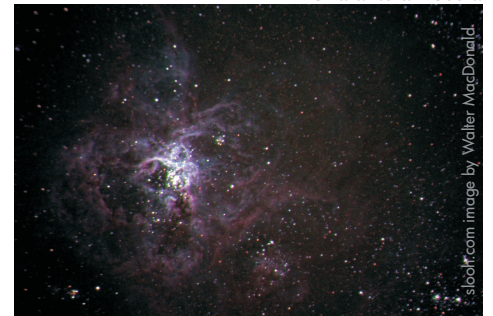
The long-term plan is to store these items at the Centre's future observatory site and make them more readily available to sign out.

The list on the KC website at <http://kingston.rasc.ca/equipment.php> is incomplete, mainly because the items have become scattered about several storage locations over the last decade or more and so physically finding them is a challenge at the present time.

Some examples of items not in the catalogue are two spectrographs donated in 2008, some new ATM equipment donated just this month, and many educational displays and material, some optical tube assemblies donated last year that need work, etc.

Alternative storage such as a dedicated storage trailer is too costly (\$2000+), and renting a storage unit (approximately \$1200/year) is not realistic. ★

The Tarantula Nebula



IYA Report: One Million Galileo Moments!

Kim Breland and Jim Hesser

28 October 2009

Dear IYA Supporter:

AS YOU RECALL, when we embarked on this year-long national celebration in January, we set a goal of reaching at least 1,000,000 Canadians with a *Galileo Moment* of significant, engaging astronomical experience. At the time, this seemed like a huge and ambitious number, and we had no idea if we would be successful in reaching this goal.



We are thrilled to tell you that we have gone well over the goal—and it's only October, with many events from National Science & Technology Week remaining to be reported! (As of October 28, the counter sits at 1,003,238 GMs.)

This is a sign of the unprecedented success of IYA in Canada—and a sign of the hard work and dedication of thousands of volunteers across the country. The Executive Committee and Advisory Board are extremely impressed with the quality, variety and creativity of IYA events. We hope that you will take a moment to reflect on this

wonderful success and to feel proud of your part in it. Please also make sure that you pass this message on to all of the IYA volunteers that you have worked with; they are the reason that we have so much to celebrate.

The reason that the GM counter jumped by 20,000 GMs in one evening, getting us over 1,000,000, was because an observatory reported the attendance from all of their programs between March and October. We know that there are other science centres, planetaria, and museums that have not reported their GMs. PLEASE log in and do this today!

Treasurer's Report 2009

THIS WILL BE MY LAST treasurer's report to the Kingston Centre membership. As of November 13, 2009 I will be stepping down from the position. If you feel that you can contribute a few hours a month to do a report or two, and have a keen knack for numbers, then please step forward at our annual meeting on November 13th. Our new executive will really appreciate you coming forward and bringing some new ideas to the RASC Kingston Centre.

This year we did spend more funds on outreach due to the International Year of Astronomy, which only comes around every 100+ years, and we have **Galileoscopes** for sale. They are \$30.00 each and can be purchased at the meetings. They make a great gift for children of all ages.

Kim Hay



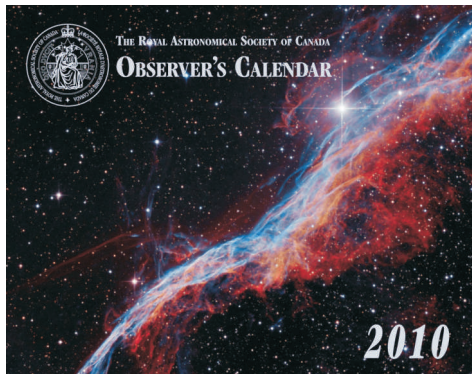
We also have in the 2010 **RASC Calendars**. These are \$15.00 cash at the meetings, or if you need them sent by mail they are \$20.00 which includes the shipping.

If anyone would like other items for Christmas, I will be bringing the bag of goodies to the meeting.

The reports that will be presented at the AGM are located here and on the Centre's website for your perusal and if you have any questions do not hesitate to contact me before or at the meeting. ★

Now that we've surpassed our goal, why do we care? We are continuing to raise funds for the IYA legacy projects extending well beyond the IYA (at least until 2011, thanks to our Promo Science grant). Every GM that you have generated will improve our chances of continuing the wonderful work we collectively have started in 2009. Please report your attendance numbers today and share in the excitement of seeing the GM counter go up by many more thousands! How high can we reach by 31 December?

Those that are up to date on reporting, we thank you. We send hearty congratulations to every volunteer in Canada who helped make this happen! YOU ROCK! ★



"Mechain seems to be receiving far too little astronomical credit to-day for his work. The numerous histories of astronomy have almost nothing to say about him. But he discovered Encke's comet, Tuttle's comet, and one-fourth of the nebulous objects in Messier's Catalogue!"
—H.S. Hogg, JRASC 1947

Vice-President's Report 2009

Susan Gagnon

THERE WAS A FULL SCHEDULE of meeting speakers (*see the KC 2009 Annual Report for the list*) and overall I was happy with the variety of topics covered by invited speakers. Our Members' Nights were very full as well and there is a suggestion that there needs to be a rebalancing of the content.

Now that I have learned something about being the VP and about the meeting content, I have a few suggestions for the future. I would limit our invited speakers to

one per quarter unless an unusual opportunity presented itself. One per quarter would allow more time to advertise that event well and possibly make our public meetings more public. One Members' Night per quarter would allow more member participation. As the "speaker" portion of the meeting is usually no more than an hour, including questions, there would be a limit of four members with a time limit of 15 minutes each (set up time would be included so set up ahead of time

would be advantageous). This accounts for only 8 of our 10 meeting slots of the year. For the remaining two, I would suggest a workshop or two. There is plenty of talent in the club and I know that there are folks out there with ideas.

If you have an idea about meeting format, content, etc., please bring your ideas along to the AGM and tell me all about it. I know that I have to work on my ability to stop the run-on speaker but I am not too good at it yet, so come and have your say.★

KAON Report 2009

Susan Gagnon

AS OF THE AGM, we will have conducted 10 of the 12 scheduled KAON sessions for this year. A total of 851 visitors took advantage of the opportunity to come to the Ellis Hall roof and tour the dome, hear an astronomical talk, and, when clear at all, view the sky through small scopes on the observing deck. The turnout has been good for the IYA, surpassing last year's numbers by approximately 300 with two sessions remaining. Visits from the **Mayor** and from **Galileo** himself did not hurt. September's event at Lake Ontario Park was also a refreshing change. The centre was responsible for presenting four of the 12 talks this year and they were as follows:

▶ *The Evolution of Galileo's Scope,*

Susan Gagnon.

- ▶ *Observing the Moon,* Fred Barrett.
- ▶ *Observing Aids Found Online,* Susan Gagnon.
- ▶ *The Galilean Moons,* Brian Hunter.

On evenings when it is clear and Queen's is covering the talk, there is a minimum of three RASC volunteers required to keep up with the demands of the crowd. When people are not looking through a scope they want to talk Astronomy. For some time now our volunteer base for KAON has consisted of the same five volunteers. However when there were issues with someone not being able to make it out, a message to the chat list always elicited a generous and quick response that has been much

appreciated.

Due to volunteer fatigue in the Centre and a similar issue at Queen's there will be a pullback in the traditional joint observing session format. Preliminary discussions are leaning towards 5 or 6 joint sessions in 2010. I will soon be making a proposal to Queen's suggesting how we can make the most of our combined resources. Queen's may of course choose to operate monthly if they find the manpower.

Easing the KAON load will enable some of us to move on and engage in other projects that interest us and we look forward to 2010. Thanks to all of the 2009 volunteers and to all who came out just to see what all the fuss was about in IYA!★

Another IYA Talk!

Hank Bartlett

ON SATURDAY, OCTOBER 17 I did a one hour talk to the **Kingston Hard of Hearing Club**. There were 19 besides myself in attendance; most were seniors. I was fitted with a lapel microphone and a typographer typed my words on to another screen as I spoke.

I showed two PowerPoint presentations: the first related to IYA/RASC/Galileo and the Star Finder, the second was images of our solar system that I have taken in recent years representing the planets

as they actually are observable. This second set did finish, however, with the first Hubble deep field image and I think it provoked a great deal of wonder. Packages were given out with pamphlets and Star Finders and we ran through how to use them. I also displayed my meteorites and many knew about the most recent falls.

As I always say, if you have not tried speaking to a group DO SO. Regardless of your experience you will mesmerize the crowd.★

Telescope For Sale

FOR SALE: I have a 5" refractor telescope with tripod, equatorial mount and motor, one 2" 28mm lens, one 1.25" 2x Barlow lens, one 1.25" 10mm Plössl, one 1.25" 32mm Plössl, sun filter, moon filter, view finder. It was assembled by Peek'r Technologies in Guelph, Ontario.

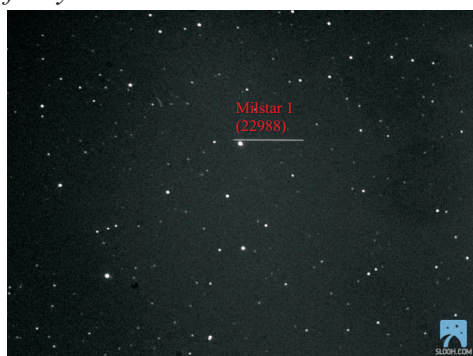
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October 2/3

Kevin Fetter used slooh.com to image a bunch of geosats...



...including *Milstar 1* (22988) which he has been observing for the past five years.



October 7

Kevin Kell: We just came off a 6 hour power outage Wednesday from about 17:40 to 23:50 or so. Now that coffee is brewing and being drank, it's time to start resetting things...the weather station has some connection to remote sensor problems, so it was reset...then you try to remember how to reconfigure the time, date, units, etc.

The all-sky camera system runs off a mechanical timer, so it is now all messed up and will need to be reset outside and then allow the system to get back into sync with time.

The FM meteor detection system was running off a low power workstation and a UPS but we shut the file server down that it stored data on about an hour into the event. Now I remember that the FM radio that it gets its data from was without power in any event! That has been reset.

The 40Khz solar radio telescope continued to operate, storing data

until the file server was shut down.

The file server itself is hooked into a UPS with a huge (24AH) external battery we wired in...too bad it failed after only about an hour. Time to get a newer and/or bigger battery!

Lastly we had one of those Canadian Tire portable power packs with a built-in 300W inverter. We took it apart at Fall'N'Stars to find a 14AH battery inside. This was fully charged so we hooked it up to a 26W CF lamp near the fire so we could read last night. It lasted 1 hour. Turned it off, let it rest for 15 minutes and replaced the 26W bulb with an 11W CF bulb as the 26 was a little bright. Turned it on and it ran for another 1 hour before sounding the low battery alarm.

The house cable modem and router were not plugged into a UPS, so we did that as a test to see if the local neighbourhood cable internet system ran on a UPS, but the inhouse one was broken and we'll have to try that again later.

The moral of the story: good practice for the next one.

October 9: LCROSS Impact

Skies were cloudy here so the only way to watch the two impacts (LCROSS and its booster) was on the Internet.

Kevin K: We just finished attempting to watch the ground based imagery of the LCROSS spacecraft impacting the moon this morning at 07:30 and 07:31 (two parts) but the slooh.com site was hopelessly overwhelmed and we got nothing.

What we did end up getting was the nasa.gov feed as well as the same feed from cnn.com from the trailing spacecraft right up until impact.

Mark Kaye: Was there any evidence of the impact? It is hopeless doing any Internet stuff from here. I came down to watch in real time and the impact raised so much water that it is

still falling from the sky as we speak...

Hank Bartlett: I watched NASA TV and it was underwhelming.

Weather aside, the timing of the impacts was optimal for western North America and RASC members out west were watching...

Joe Carr: Members of Victoria Centre converged on our observatory at midnight and observed through the VCO's Meade 14" using a DMK21 video camera. This setup provided us with an excellent view on a large screen monitor and we were blessed with clear weather, however we did not observe a plume at the appointed moment at 4:30 a.m. Analysis of the recorded video through post processing might reveal something we missed visually.

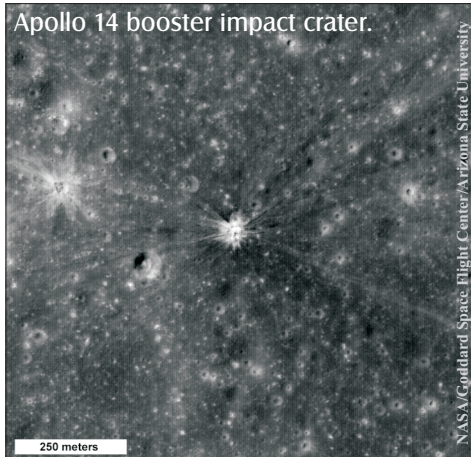
Ed Majden: WOW! I should have gone to bed! Clouds moved in and NASA TV was uneventful! Makes one wonder how large a meteoroid creates the observed impact flashes on the Moon. Admittedly the meteoroids are travelling at much higher velocities than the two impact devices. Much more of an energy release on impact for the meteoroids because of their high velocities.

David Roles: No ejecta from LCROSS in visible light seems to have been seen even in the 200-inch Palomar scope.

Here's an interesting 115 foot diameter lunar crater (*see image next page*) created by the impact of the Saturn IVB booster from Apollo 14 which was intentionally crashed onto the moon.

According to NASA: The booster was intentionally impacted into the lunar surface on Feb. 4, 1971. The impact caused a minor "moonquake" that scientists used to learn about the moon's interior structure. Seismometers placed on the surface by Apollo astronauts returned data on the tremor.

Apollo 14 booster impact crater.



Bill Weir: It's a negative observation from here too on the southern tip of Vancouver Island. I was observing with the f/5 eq mounted 25" newtonian in the Godin/Newton observatory at Lester B. Pearson College of the Pacific. I was using 317X magnification. The transparency was fairly good and the seeing was good enough for me to be able to pick out 6 craterlets within Plato.

When I walked out of the dome at 0445 PDT I was sure I'd seen a light feature brighten within the dark crater. Two of the four students observing outside the dome described the same thing I had seen. They were using 10" f/4.7 Dobsonians at around 250X. We were generally pleased.

I just viewed the the video shot through the 36" scope at Lick and now see that the feature we saw was actually a ray of light leaking through a cleft in the wall of the crater. Oh well, viewing that video confirmed that I was observing the exact location that I should have anyway.

It was still worth it to see the results of the other experiment that was running. This was seeing how many of the about a dozen teens attending the school, who said they wanted to observe this event, would actually drag themselves out of bed at 0330 in the middle of the night. I think 4 is actually quite a good number.

October 11/12

Susan Gagnon: I was out for about an hour (until my feet froze) and bagged two NGCs. One was 6940 which I just stumbled on, and have not done any research into yet but I had a feeling that there was a significant ring of nebulosity N-E-S in a ring around it. The second was 6819 which I starhopped to and found it a very cool shape. It also seemed to have some nebulosity to the north.

I may also need to have my eyes checked, I am thinking that is a lot of nebulosity without a filter!

October 14

Kevin F captured video of ISS passing in front of the Moon. I aimed at where the moon would be in the morning sky, and then went in to work. *You can see this video at:*

www.kfetter.com/satvideo/other2/ISStransit.wmv

October 25/26

Walter MacDonald: Wow, a clear night! I can't believe it. The imaging run started to go off the rails at 05:00 with "out of memory" errors and finally crashed at 06:04 (and woke me up), just 23 minutes before the beginning of nautical twilight. I was able to shut everything down manually, except for FocusMax which had to be terminated (it insisted MaxIm was still using it). So there's a lesson for everyone: you should reboot your computer more often than every three weeks before things start getting wonky. These errors cost almost 1½ hours of imaging time and 28 lost targets. There had also been one lost hour of imaging time in the evening (I was watching a movie and so missed the alert), but despite that a new record number of variable stars was imaged this night: 259! There were 288 stars in the plan which would have been just about a perfect fit for the length of night currently, so that is a potential new record to shoot for

some time. It will likely be a few weeks before I get the photometry all done on this night's images, but I've decided that it's nice to always have a good backlog around to work on.

Kevin K: It was clear?! We got home late...maybe 7:45 p.m. or so on a very long day...what a surprise to see the all-sky camera system up and running! It was rebuilt from scratch Saturday (it had a corrupt registry) and surprisingly did not take too long. Some scripts were redone and the workstation will now stay powered up 24/7 (mostly because the timer turning it off regularly probably caused the windows registry corruption) and because it is getting cold and hard drives do not like to spin up when they are cold. Saturday night's run went well.

Sunday night's failed around 3:30 a.m. this morning due to a driver/memory problem! Spooky or what?

Yes...Windows 98, ME, NT2000, and even XP should be restarted weekly.

Kevin F recorded video of a pass of Iridium 920 (24871):

www.kfetter.com/satvideo/other2/24871.wmv

October 31: Halloween!

Kevin F: It wasn't supposed to be clear at all tonight, but it did end up being partly clear. So I set up my scope and tried to show Jupiter and the Moon. One kid looked at the Moon, and two of them tried to see Jupiter but clouds got in the way. I gave one of them an Astronomy magazine. We don't get a lot of people on our street compared to other streets. Next year Jupiter will be in the sky for Halloween, so I can try again.

I hope others had better luck.

Kim Hay: That is a real good idea about handing out the Astronomy magazines, good for you. We had 15 kids all night, but the winds were still

Continues on page 9...

THE NOVEMBER METEORS OF 1832 AND 1833.

...I am old enough, I do not say fortunately old enough, to remember distinctly the brilliant display of meteors in Ireland in November, 1832, a sight never to be forgotten. I was then at Castlenock School, a large private school in the neighbourhood of Dublin, just outside the Phoenix Park. The meteors were not then called "November Meteors," for no one at that time dreamt of their being annual visitants, and the name of "Leonids," by which they are now familiarly known, was not given to them until many years later...

...Lucky it was for me that we boys had every evening to run across the open from the school room to the supper room, as otherwise I should probably have altogether missed seeing this magnificent spectacle, for it was on the occasion of one of these evening transits, shortly after eight o'clock, that we boys, as we came "bounding out of school," were amazed and awe struck by the extraordinary spectacle which the heavens presented. It was as if all the stars had become suddenly unfixd and were rushing pell mell to the Earth, leaving the firmament an empty void. It looked indeed like a shower of fiery snow flakes, so thickly and yet so gently did the falling stars seem to come down. The author of the noble poem of "Festus" must surely have had in his mind this amazing spectacle, or the still more astonishing display in November, 1833, when he penned the lines,

"He shook

*The stars from heaven like rain drops
from a bough,
They poured adown Creation's face
like tears."*

It was indeed a realization of the picture of the Hebrew poet when he wrote: "All the host of heaven shall

be dissolved and the heavens shall be rolled together as a scroll, and all their host shall *fall down*, as the leaf falleth off from the vine, and as a falling fig from the fig tree."

I need not remind you that these phenomenal meteoric showers occurred in the Novembers of two successive years, 1832 and 1833. But in the former year the display was more brilliant in Europe and the western part of Asia, whereas in 1833 the New World was the more favoured.

Strange to say while there are abundant authentic records of the great meteoric shower on this continent in November, 1833, there are, so far as I have been able to discover, comparatively few of the meteoric shower of 1832 in the Old

It was as if all the stars had become suddenly unfixd and were rushing pell mell to the Earth, leaving the firmament an empty void.

World; indeed I have not seen even a single account by an eye witness of the November shower of 1832 in Ireland. A Captain Hammond records a wonderful display of shooting stars at Mocha on the Red Sea on the 13th of November, 1832, and we are told that at Portsmouth, England, "shortly after midnight on the 13th of November in that year the heavens presented a very extraordinary appearance. Thousands of meteors were seen continuously dashing about in every direction, and the whole atmosphere was illuminated. The driver of the London stage coach said the effect was awful, and that it was with the utmost difficulty he could get his horses to face it."

The meteoric shower of November, 1833, which was so much more brilliant on this continent than

in Europe, seems to have extended from longitude 61° to 100° in Central America, and from the North American Lakes to the West Indies.

There is, as I have said, no lack of accounts of the latter phenomenon. The *American Journal of Science* for 1834 contains some sixty or seventy detailed descriptions of the shower of the preceding November, furnished by astronomers, meteorologists and others all over the Union. The astonishment and delight with which the spectacle was beheld by the educated classes was only equalled, it would appear, by the consternation and terror of the ignorant and uneducated, who thought that the terrible spectacle portended some awful disaster if not the end of the world, and in fact seemed to expect

"To be sent

*With hideous ruin and combustion,
Down to bottomless perdition."*

Similar accounts were given by eye witnesses at the Falls of Niagara, in North Carolina, and the West Indies, and Miss Clerke, the well known astronomer, thus sums up the account of this meteoric display on this continent:

"On the night of November 12th-13th, 1833, a tempest of falling stars broke on the earth—North America bore the brunt of the pelting. From the Gulf of Mexico to Halifax, until daylight with some difficulty put an end to the display, the sky was scored in every direction with shining tracks, and illuminated with majestic fire balls. At Boston the frequency of the meteors was estimated to be about half that of snow flakes in an average snow storm. Their numbers, while the first fury of their coming lasted, were quite beyond counting; but as it waned a reckoning was attempted, from which it was computed, on the basis of that much diminished rate, that 240,000 must have been visible during the nine hours they continued to fall."

Continues on page 9...

Computer Control of an ETX Telescope

Hal Boden

WHILST WAITING FOR ANY POSSIBLE new developments in observing tools, use can be made of what is already available.

One limitation of the Stellacam type of camera is its small field of view. Even with a focal reducer this is just less than $\frac{1}{2}^\circ$ with an 8-inch Schmidt Cassegrain, which is unsatisfactory for a number of Messier objects. This can be overcome to some extent by using a 'fast,' small-aperture telescope. The small aperture is compensated for by the lower magnification and by the high sensitivity of the Stellacam. (For some outstanding images using such a combination, see Jim Ferreira's webpages at:

<http://www.lafterhall.com/astro.html>). For this reason I bought a Meade ETX 80 refractor about a year ago. One drawback is that this does not

come with fittings for a finder. This is probably because it is a GOTO scope.

It is possible to go further and have the scope under computer control using the Meade astronomy software. I decided to go this route. Having bought the connector cable I found that it required an RS232 port which is not available on my laptop. After a short search I found a USB/RS232 adapter cable and installed the driver on the laptop. The telescope and laptop refused to talk to each other. Frustrated I put the problem aside.

Recently I took it up again and found that others had had similar problems. I tried several drivers including the Meade version but to no avail. Then my luck changed and I came across a website which gave access to a driver which the author

had found to work. This solved the problem and now, at least potentially, I should be able to point at an object in the Astronomy software on the laptop and have the telescope slew to that object.

Preliminary trials have been encouraging although I will need darker skies and a better horizon than I have at present to do an accurate setup, etc. A lot will depend on how good the screw drives on the telescope are in following the computer's instructions. Even if it doesn't make a hit first time there is a block search routine which might help to locate the target. At least any movement can be followed on the laptop.

Time will tell how practical this combination can be, particularly when interfaced with the Stellacam. ★

KC Volunteer Hours

Kevin Kell

THE FOLLOWING IS A SUMMARY from the detailed log I keep for volunteer hours logged by members of the RASC-Kingston Centre.

In general, volunteer hours compiled during any organizing activity for the Board of Directors (regular meeting preparation, attending regular meetings, public talks, public outreach events, preparation for any of those events) count.

For regular members, volunteer hours compiled during public outreach activities, preparation for those events, but perhaps not actually attending a regular function like a meeting, will count.

...Observing Reports

...continued from page 7

too wicked to bring out the telescopes. The clouds were around, but after a day of rain we did see the sun for about 20 minutes. Today will be much better. Thanks for sharing, and trying. ★

2008 October	77
2008 November	107
2008 December	66
2009 January	92
2009 February	46
2009 March	106
2009 April	84
2009 May	113
2009 June	70
2009 July	54
2009 August	40
2009 September	198
2008-2009 Year total	1053

2007-2008 Year Total 776

A great big thanks to all those who step forward and help out! ★

...Blast from the Past

...continued from page 8

This is an excerpt of a paper given by Dr. Meredith at the meeting of 1897 March 30 and which was printed in the Transactions of the Toronto Astronomical and Physical Society for the year 1897, pp. 10-19. ★

Meeting Report

Kevin Kell

FRIDAY, OCTOBER 9TH, 2009 was our regular Centre meeting in Stirling Hall Theatre A from 7:30-9:30 p.m. Only members were in attendance and turnout was low, about 13 people in all.

We had presentations from **Leslie Roberts** on his astrophotography followed by a short presentation on what happened at Fall'N'Stars 2009 by **Kevin Kell**, followed by a little bit of image processing on the all-sky camera to eliminate the camera noise.

The break was followed by a demo of the Galileoscope with a couple of sales to interested folks.

Lots of announcements regarding **Terry Dickinson** in Napanee with some free public observing nights scheduled for later this month and a digital SLR camera workshop he is holding as well.

Next month is our **Annual General Meeting** and it will be next door in Chernoff Hall Auditorium at 7:30 p.m. ★

Product Review: Magellan Roadmate 1212 GPS

Kevin Kell

WE FINALLY PURCHASED a GPS unit recently and so far have only positive things to say about it.

Our greatest worry with the new generation of colour LCD mapping type displays was that they might lack the display of latitude, longitude, elevation and time. A survey of owners of various units has suggested this is not a worry. It took a bit of digging with the Roadmate 1212 but we did find four pieces of information displayed. For \$130 at Canadian Tire this was a definite find. It comes with a dash or windshield mount, a USB 12VDC charger and a manual on CD-ROM.

Testing the unit for maps, addresses, routes, programming and non-nag features has been fun and all tests came through just great. The accuracy of the unit at our

observatory matches up exactly with previous surveys done with other GPS units some years back and topographical maps.



The only flaw is the altitude display. This shows a variance of up to 5 meters when walking around the back yard with maybe a 1 meter change. It also reads an average of about 186 meters when our other

sources show us at almost exactly 155 meters. That's not too bad as we have known that altitude measurement has much bigger error bars.

This unit will be particularly good at helping us navigate to places we have not been to before but also to pinpoint our location when we go off-home-site occultation hunting. It doesn't have any way of entering address data in lat/long form, say if you were looking for the Nirvana Observing Site near Bon Echo Park and only had a lat/long location.

The maps are dated mid-2008 and have proved to be 99% or better accurate. The only item not yet tested is the time display accuracy; we will be doing some tests with that soon, using both computer-based Internet time, the CBC time signal, and shortwave signals if we can. ★

ATM Equipment Donation to RASC KC

Walter MacDonald

THE KINGSTON CENTRE recently received a donation of amateur telescope making equipment from Tibor Devenyi of Merrickville. Mr. Devenyi used this equipment to make a 10" mirror some time ago. It consists of the following items: a mirror grinding machine, home built, according to plans described at the website mirror-o-matic.com, a Foucault test setup with micrometers and knife edge, a spherometer, some pitch, and various grinding and polishing compounds.

Mr. Devenyi has a long-standing interest in instrumentation. He is a very capable and accomplished instrument maker as can be seen in the quality and precision of the donated items.

★



NEWT by E. Kliptik



Some characters in this cartoon are adapted from The Print Shop Ensemble III