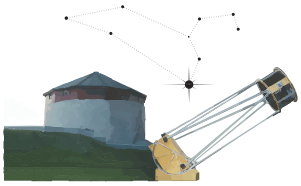
December 2014

Regulus

RASC Kingston Centre



Malcolm Park imaged this Geminid on December 13/14 at 01:52 with a Nikon D35 and a 25s exposure. He reports:

The Geminid meteor shower has a good reputation. But it's usually poor weather. This is the first time I've ever seen them. Personally I was disappointed. There were lots of meteors, and I was able to find a beautiful place with a nice vista and clear skies. The light pollution was minimal, like Starfest. Some light domes (including BOSTON!) on the horizon but locally very dark.

The meteors were pretty consistent, I wasn't counting them but there were no fireballs like the one in APOD today that I saw. Another report I have heard from New Mexico was similar. It was a nice shower but not spectacular. But the prospect of an intense outburst or meteor storm was what I was hoping for. On that basis, I would travel to see it again in a heartbeat because you just never know. Plus Vermont is stunning blanketed in snow and ice.

Upcoming Meetings

Thursday, December 11 6 p.m.
Annual Christmas Dinner
Aunt Lucy's Restaurant

Thursday, January 8 7 p.m.
Members' Night:
1) How to build and use a barn door tracker.
2) What I got for my Astronomical Christmas.

Thursday, February 12 7 p.m.
Mike Earle (RMC):
Talking to Cubesats with the
VE3RMC Amateur Radio Station

Meetings are held in Room 324 at Ellis Hall on University Avenue at Queen's University in Kingston, Ontario. kingston.rasc.ca★

In this issue:

Reports and Other Items

From Kingston Centre, the RASC, and Beyond...

RASC Award Nominations

Glenn Hawley (RASC Awards Committee Chair) reports: Nominations for the 2015 awards are due by December 31. Details, including eligibility and nomination requirements for each award, can be found at http://www.rasc.ca/awards. Click on the links to individual awards for full information. Not sure how to write a nomination? There are many examples of successful nominations on the awards pages of the Web site. Think about the contributions of those hard working RASC members that you know and whom you believe qualify, and nominate them for an award.

Christmas Dinner

There was a full house (about two dozen members) for the Centre's annual Christmas dinner at Aunt Lucy's Restaurant and reports indicate the festivities extended past closing time!

Other Items

Kim Hay recently received an AAVSO Solar Award for making over 2000 observations...Thanks to **Susan Gagnon** for making a fabric cover for the Torus telescope (see page 10), and also for performing an audit of the Centre's equipment on December 8th...**Kevin Kell** reports that Drupal (which runs our Centre's website was updated from version 7.33 to 7.34 on November 20th. The server operating system was also upgraded, on December 22nd from Fedora 20 to 21...2015 is the International Year of Light and Light-Based Technologies: www.light2015.org.★

A Letter of Thanks

Dear Susan,

I can not thank you enough for your generous gift of the Galileoscope. We are so excited to have the team assemble it and to hopefully feature it in our front-of-house display.

That was such a kind gesture and I am so thankful that you still gave up a part of your evening on Wednesday to drop by, even with the stormy skies!

I sincerely hope that you and other RASC members will get the chance to come out and see *Orbit*—we open on Friday and run until November 1st.

It was so good to meet you and thank you so much again.

Sincerely,
Jane Karges, Production Manager.

A December ISS Pass

Malcolm Park

This is a 15s exposure of the ISS that took place on December 21st at 22:36 EST.

RASC-KC Board of Directors

President:	Kim Hay
Vice President:	Greg Latiak
Secretary:	Susan Gagnon
Treasurer:	Kevin Kell
Librarian:	David Maguire
Editor:	Walter MacDonald
Nat'l Advisory Council Rep:	*vacant*
Directors without Portfolio:	Rose-Marie Burke, Bruce Elliott, Paul Winkler

Committee Chairs/Coordinators

Equipment Loan:	Kevin Kell
KAON:	Susan Gagnon
Webmaster:	Walter MacDonald

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:

walter (dot) macdonald2 (at)
gmail (dot) com

If you are sending Word/Excel documents, please save them as Office 97-2004 format first.

The Fine Print:
Members of the Kingston Centre receive *Regulus* as a benefit of membership. Non-commercial **advertisements** are free to members of the Centre. Paid commercial advertising is also welcome and should be in electronic format.

Submitted material may be edited for brevity or clarity. Permission is granted to other publications of a similar nature to print material from *Regulus* provided that credit is given to the author and to *Regulus*. We would appreciate you letting us know if you do use material published in *Regulus*.★

RASC Kingston Centre
c/o 76 Colebrook Road,
RR#1, Yarker, ON K0K 3N0

E-mail:
kingston@rasc.ca

Website:
kingston.rasc.ca

President's Message

Kim Hay

I WOULD LIKE TO WISH all of our membership and Executive members and volunteers a Wonderful Holiday and Christmas Season!

Welcome aboard **Greg Latiak** as RASC-KC Vice President, **Susan Gagnon** as our new Secretary, **David Maguire** for staying on as Librarian, **Walter MacDonald** for continuing as Editor of *Regulus* and continued support for the RASC-KC website. **Paul Winkler** as Director, and **Bruce Elliot** as Education/ Outreach Chair.

Thank you to **Rose-Marie Burke** for your dedication and work over the past year as the RASC-KC Secretary. We look forward to more of your astrophotography images.

Remember our January 8th, 2015 meeting will be on "What I got for my Astronomical Christmas", and "How to build and use a Barn Door Tracker." If you want to get prepared here is an article sent by Kevin Kell http://lensvid.com/gear/diy-exoplanet-detector-using-dslr/ Here is an excerpt: "Buying and building the hardware you see in the video was actually the easy part. The hard part was finding a way to look for a target star, track it and be able to measure the brightness of the star changing as a planet passes by it. Now it is important to realize at this point that the star chosen for this task – called simply HD 189733 (about 63 light-years away from us in the constellation of Vulpecula) is known to have an exoplanet orbiting it since 2005 – so Schneider did not actually discover a planet outside our solar system but was "only" able to confirm its existence."

Our February Meeting we will have **Mike Earle** (a Ph.D candidate from RMC) who will be speaking to us on "Talking to CubeSats with the VE3RMC Amateur Radio Station."

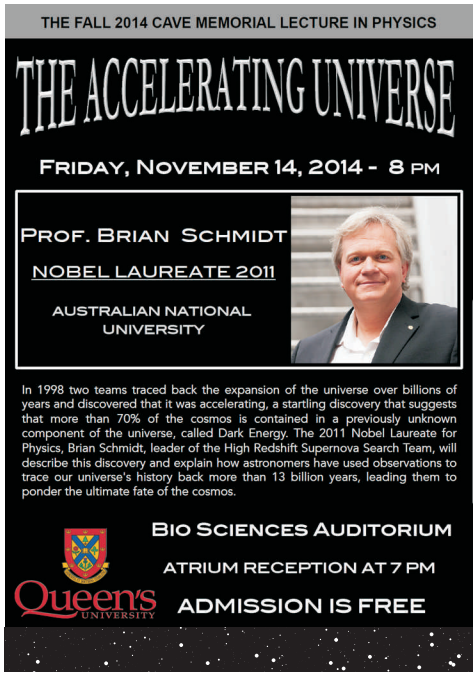
In closing, I would like to wish everyone a happy new year. See you all in 2015.★

CAVE Lecture Report: November 14

Susan Gagnon

THE BIOSCIENCES ATRIUM was a festive spot, with food, drinks, and a lot of conversation. At 8 p.m. the auditorium filled to capacity to hear 2011 Nobel Laureate **Brian Schmidt** of the Australian National University.

There was a brief welcome by the Department head **Marc Dignam** followed by a full introduction by **Stephane Courteau**. Dr. Schmidt provided a full picture of the universe as we know it and a full explanation of how we know it. His speaking style was relaxed and entertaining. Stories of competing teams of astronomers, sharing of large telescope time and the importance of Government understanding that they cannot duplicate the success of the past through directed funding in science provided a well rounded picture of the field today. The take home message for the future of Astronomy in Canada was, if you do not invest in a share of the new large installations you may as well get out of the business. My understanding of the Australian success in producing good science is that the elected officials don't necessarily understand all the science they fund, but they understand its importance and leave its direction to the Scientists. Wow! What an idea!



The Q and A was just as enjoyable. I cannot believe anyone was disappointed. It was a good night for Astronomy in Kingston.★

Meeting Report: November 13

Kevin Kell

WE HAD A GREAT MEETING ATTENDANCE for our AGM: 22 people! They were presented first with updates about the Centre followed by presentations from:

- **Richard Weigand**, featuring the Lunar and Planetary Institute's website http://www.lpi.usra.edu/, which amongst other things has a great newsletter, the *Lunar and Planetary Information Bulletin*, that is available as a free download.
- **Mark Kaye** showed images of the lunar eclipse in Georgetown and the partial solar eclipse with **Richard Fell** at Point Clark, Lake Huron.
- **Malcolm Park** wowed us with images from Chile's Atacama Desert, and informed us on how light pollution has increased over just the last five years.
- **Bruce Elliot** showed us a PowerPoint presentation on the L&A Dark Sky Site. He showed images he had taken of several constellations such as Draco, Cassiopeia, and Perseus, as well as the Double

Continues on page 10...

Observing Reports: November-December

Various Members

Mon/Tue, November 10/11

Kevin: It looks like the guys at UWO have recalibrated the orientation of the AllSky2 (aka UWO#10) camera and the first night of events is working their way through the system as seen here:
starlightcascade.ca/allsky2/tonight/
There are also relatively live images of the night from:
http://starlightcascade.ca/allsky2/
and
http://starlightcascade.ca/allsky1/

Wednesday, November 12

Paul posted a link about the recent naked eye sunspot: Giant sunspot AR12192 returns–and it's bigger and badder than ever. [*Looks like it's just coming 'round the corner.*]
Walter: Interesting! I looked at the Sun both yesterday and today with my solar glasses and didn't see the spot. Of course, it's harder to see if it's near the edge. I'll continue to look every day in anticipation of picking it up again (weather permitting). I've seen naked eye sunspots before, but this will be the first I saw two rotations in a row. Here's hoping for three!

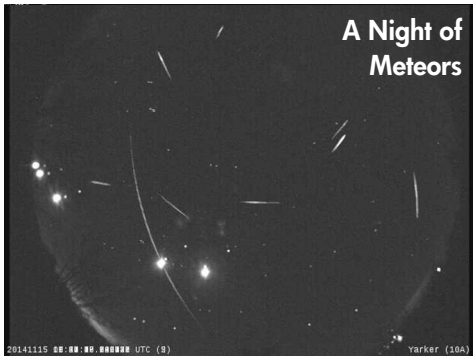
The last time I saw this spot, I showed a few neighbours across the street. They were impressed. Then I explained that the trick is to use a black marker to put a dot on the glasses. When the last neighbour finished looking and took off the glasses, he gave them a thorough inspection. I kidded that he was looking for the black dot! We all had a good laugh. With luck, I can show the sunspot to them again in a few days.

Thu/Fri, November 13/14

Walter: It finally cleared last night as I discovered at 4 a.m. this morning. So I went out and looked at Jupiter and the Moon in my C8 (mostly the Moon) from 04:15 to 04:35. It was –7C, no wind at all, and in addition to the dusting of snow on the grass, everything was covered in a moderate layer of frost. (BTW, my snow shovel is still in the basement!)

The terminator was spectacular this morning, especially the half dozen or so mountain peaks that were blazing in sunlight on the dark side.

Fri/Sat, November 14/15



Mon/Tue, November 17/18

Rose-Marie: I woke up around 3:30 a.m., stuck my nose out the back door, saw a clearing, so figured I'd get out there and see how long I'd last before that brutal cold wind drove me back inside. Got all bundled up and took camera and tripod outside, within 2 minutes of setting up I got one beautiful bright meteor that left a smoke trail that persists in the next 9 images, these are 30-second exposures so about 4½ to 5 minutes. I lasted about 25 minutes outdoors, the clouds came rolling back in and my toes were cold, so came back in, stoked up the wood stove and downloaded the images. Just got the one, but it was worth going out for.
Rick: Terrific shot RoseMarie! I went out without my camera just to lay in my zero-gravity chair. After 37 minutes I had only seen two meteors (one fairly nice) and I was starting to get chilly so packed it in. I'd have stuck around longer but not for <4 meteors per hour. Even warmly dressed lying in a chair compresses all the insulation underneath and my back and posterior started getting cold. For the Geminids I will do as I did for the big Leonids back around 2000-2001 (?) and lay out a tarp, thick foam pad, couple of sleeping bags over me, warm clothes, and snowmobile suit. At that point I can sleep quite comfortably outside. Though that isn't necessarily a good thing.
Kevin K: AllSky1 had a failure last night and took only 2 images.

Maybe this one taken from AllSky2 at 08:57:49 UT or 03:57:49 EST? This is in the northwest. There are raindrops on the dome from the snow & rain earlier in the day and some of them affect the image.

We had an earlier meteor at 03:29 EST in the north but that sounds like it was too soon.
Rose-Marie: Here's a shot of the smoke trail

off the meteor. The info from the camera download says 4:58:10, and yes, that is an hour off. (Now fixed. I am really beginning to hate daylight savings time!) So yes, I am inclined to think it is the same one. Really glad I got to see it in person, 'twas truly a lovely sight. ABOUT TIME to get to see something astronomical; I've been going into severe withdrawal lately.

Kevin K: Awesome! Gotta love simultaneous observations. It restores faith in the automation, being able to "truth" it out once in awhile.

Once a new 4" dome arrives next week, we are going to renovation AllSky1 with its 14" dome, heaters and fans. With a much smaller airspace, it should take much less heat to stay clear, keep bugs out better (our existing is always full of flies, bees, nests, etc).

Wednesday, November 19

Walter: I looked at the Sun again today with my solar glasses and thought I could just barely make out a naked eye sunspot just off (below) centre of the disk. If this is real and the same spot as last month then I have to say I am rather disappointed! (I found I could only see it if I blocked the scattered light coming from under the glasses.)

[**Clark Muir** *reported on this on RASCals*: This time the sunspot is officially AR2214. It was renamed from AR2192. It is fairly easy to see this spot naked eye but not quite as much as it was last month. Solar observing is the only thing going on in Ontario as of late.]

Monday, November 24

Walter: It was clear Monday night during the windstorm and I was out briefly to check around because I thought I heard something. Everything looked OK, but I was rather scared to be out in that wind lest I become a victim of some sort of neighbourhood shrapnel!

Tuesday, November 25

Kevin K: Tonight, asteroid Palinurus (4832) was to be occulted by the star 2UCAC 34064331, magnitude 11.9. We went out to the observatory after 18:00 and it was cloudy and I saw snow falling from the sky, with a good 10–20 km/h (^$@(^ that! and went inside for dinner and fire.

The neighbours to our immediate north have decided to put out their rear deck white Christmas lighting as well. oh joy.

As it turned out, it did clear a little bit but then a sky covering cloud came by just around the predicted time. Oh well. Mag 11.9 target star is a little bit dim for my tastes; there are a *lot* of those dim stars in the eyepiece!

Walter: It was not clear here last night either, but it was still breezy.

Wed/Thu, December 3/4

Rose-Marie: I was out with the dog, stepped off the back deck and looked up just in time to see a beautiful bright white spark coming down through Cassiopeia. Even in the moonlit sky it was quite bright. Kevin, I'm wondering if it'll show up on the allsky, it was 10:29 or 10:30 p.m. One of those things I wish I'd had the camera pointed at.

Kevin K: I'm afraid we had a software failure on AllSky1 last night. AllSky 2 was up and running however.. and is in UT...letsee...Dec 03 22:30 EST = Dec 04 at 03:30 UT. We have one at 03:29:40 in the northwest— quite nice!

Tuesday, December 9

Kevin K: It looks like there is now a 13th allsky camera station set up and SCGO in Yarker is no longer the eastermost: http://gigantid.physics.uwo.ca/~asgard/13.html shows to be at the Canadian Space Agency Headquarters, south of Montreal in St. Hubert. Too bad station 1 (Western U) and station 9 (Shrewsbury) are out of service.

Friday, December 19

Kevin K: Wow, it has been *weeks* I swear since there has not been cloudy nights. We have two of clear nights coming up Saturday and Sunday. Woohoo! Not quite sure what is in the evening or morning sky anymore.

Hank: Tomorrow it will be a whole month since my last solar observing. Imagine!!!

This morning at 5:30 I looked out the window and saw a star and thought YEAH, clear sky. By the time sunrise came it was cloudy.

Sat/Sun December 20/21

Kim: It was a beautiful –14C morning. So I grabbed my camera on Saturday morning to get a picture of

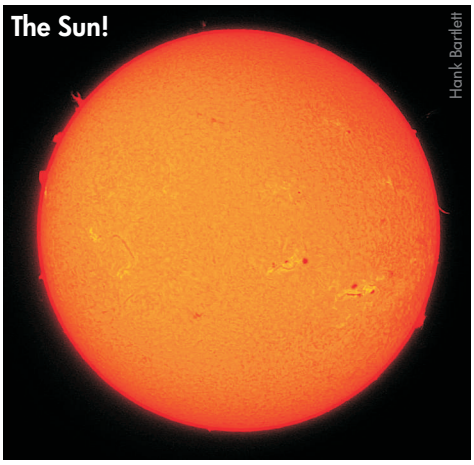
...Observing Reports: November-December

Various Members

the waning crescent moon. Then before heading into town I was able to view and sketch the sun.

It was a great day, until the clouds came back. I was hoping too see Venus in the West, but the band of cloud was covering it.

Hank: Nice lunar image Kim and it was so nice to see clear sky even just for the one morning like that. I managed to get out for H-alpha and snap a few images before the cloud as



well. It was darn cold early on though. The main mass of current sunspots is rotating off but surely there are more coming with SS2244.

Kim: The sun is certainly active; the aurora is behind the cloud I am afraid.

Rose-Marie: I kept looking at spaceweather.com Friday night hoping auroras would appear, but nada. Last night I went out with the binocs around 21:30 to see if I could find comet Lovejoy, but it was too low on the horizon right over Kingston. Went out again at 23:00, Orion and Sirius were higher up, but there was thin cloud coming in. Argh. Too tired both nights to get bundled up and tackle the cold. The

Continues on page 10...

Dark Sky Questions

Various Members on the RASCals List

Frank Dempsey: Just returned from several nights at the Manitoulin Dark Sky Preserve (Gordon's Park on Manitoulin Island) with phenomenally, spectacularly clear and dark skies Thursday and Friday nights, and increasing cloudiness Saturday night. A couple of questions occurred to me:

1. I noticed that after the end of astronomical twilight, the sky was quite bright with plenty of illumination of the ground (at this DSP, there was no detectable light pollution in any direction until just before moonrise, and the atmosphere was so dry that the daytime sky was a hard blue colour and I watched a couple of cumulus cloud wisps attempt to congeal into clouds during the afternoon but they just sheared apart and vanished after a few minutes). After both the Sagittarius and Scutum star clouds of Milky Way set (by about midnight) the sky brightness and ground illumination were much reduced. Has anyone else noticed this at dark sites, or am I out to lunch on this idea of significant illumination of the ground from these two star clouds?
2. I could not spot the Gegenschein but I might be able to blame it on moonrise being too close to the midnight period (halfway between sunset and sunrise). Have other RASCals seen it?

Peter Jedicke: Why should it be a surprise that a dark-adapted eye, attached to a brain that is thinking about seeing photons for hour after hour, is able to pick up the illumination at the ground caused by the integrated light of millions of stars only a few 10^{20} metres away? My experience at Texas Star Party in 1990 (the only time I was there) is similar to yours. I remember when Venus rose at 04:00 or whatever it was, hearing someone complain that the organizers would plan a major star party during a time when they "should have known" that Venus would spoil the observing. I hope they were joking.

Rick Huziak: In a very dark sky, you can see your shadow on the ground from the Milky Way, then once Jupiter and/or Venus rise, you can see your shadows from then, and the sky goes soft from the light pollution from these planets. And the sky is darker without the MW around. It becomes difficult to do deep SQM readings with the MW overhead. As for the Gegenschein, it is not always visible—sometimes it is very bright, and sometimes not visible at all. Not sure why. At Grasslands DSP and Cypress Hills DSP, all of these phenomenae are obvious, but also visible at good dark skies everywhere.

Chris Baldock: Not out to lunch, but out for a midnight snack isn't out of the question. It is not inconceivable that myriads of unresolved stars would have an impact. My parents had a cottage in the Bruce Peninsula. The darkest nights required a flashlight and occurred when it was cloudy. You couldn't see your hand in front of your face. On clear nights the stars provided enough illumination to carefully walk around in the dark...and see your hand in front of your face...which is useful when having a midnight snack out under the stars. ★

Secretary's Report 2014

Rose Marie Burke

Regular Meetings of the RASC Kingston Centre from November 2013 to October 2014 were held in Room 324, Ellis Hall, Queen's University.

November 14, 2013: Annual General Meeting followed by members' reports.
December 12, 2013: Holiday Banquet of RASC Kingston Centre held at Aunt Lucy's Restaurant, Kingston, Ontario.
January 9, 2014: **Brian Hunter** gave a presentation on how to observe the March 20th occultation of Regulus as well as suggestions and discussion among membership for equipment and locations for observation.
February 13, 2014: **Dr Bruce Macintosh** spoke about "Pictures of Other Worlds: Directly Imaging Extrasolar Planets."
March13, 2014: **Dr. John Percy** gave a talk "Understanding Variable Stars: How the AAVSO—and You —Can Help."
April 10, 2014: Special Observing Social for Members and their Guests at Lake Ontario Park.
May 8, 2014: Video simulation of an Occultation and Members' presentations.
June 12, 2014: Members' Night.
September 11, 2014: Members' Night.
October 4, 2014: **Randall Rosenfeld**, RASC Archivist, gave a talk: "What's in the Constellation Crater, How Newton Got 500 Bottles of Cham-pagne, and when Halley Drank Brandy and Swore: The Surprising History of Astronomy and Alcohol."

Projects and Ongoing Observations for the Year included:

Light Pollution Monitoring. The City of Kingston has been in the process of exchanging bulbs in night lighting fixtures with LED bulbs. Members were encouraged to see if this had an effect on the amount of light pollution coming from Kingston, and to photograph the night sky and compare with photos from past years.

Torus Telescope. Queen's University has replaced the 16 inch Torus Telescope in the Ellis Hall Observatory with a 14 inch Celestron telescope. RASC Kingston Centre reached an agreement with Queen's U. to get the 16 inch Torus telescope on loan for use by Kingston Astronomy Club members. Over the course of several months work parties were organized to build a shed to house the Torus telescope, to move the telescope, mount it, clean the mirror, recoat the mirror, set up the computerized operation, and collimate the mirror. The commissioning phase is almost complete.

RMC Domes. Royal Military College Physics Department was taking down two astronomy domes, one 16 ft in diameter and a smaller 7 ft diameter dome. RMC is providing these domes to Kingston Centre on a long term loan. A work party was organized in October to dismantle the domes and move them to where they will be stored at a member's house. Kingston Centre thanks members for storing various pieces of equipment.

Fall'N'Stars Annual Event. Members of RASC Kingston and RASC Belleville Centres cooperated in organizing the annual Fall'N'Stars star party event held at Vanderwater Conservation Area near Thomasburg, Ontario September 26th to 28th, several members attended this event.

KAON (*Kingston Astronomy Outreach Network*, Queen's U. Observatory) RASC Kingston members volunteered to attend the KAON monthly Saturday public events at Ellis Hall, Queen's U. Telescopes were set up on the observing deck after the talks for public viewing, these events provided an opportunity to advertise RASC Kingston Centre and introduce members of the public to astronomy. Unfortunately, due to renovations of the viewing deck the fire marshall has declared that only a limited number of people can be allowed on the deck; these events have now been cancelled. Kingston Centre is looking at possibilities for future outreach.

Website. The RASC Kingston Centre website administrators have upgraded the website to a new Drupal website and given it a more modern layout, more features, and made it more user friendly for members.

Awards. Two members received Awards this year: **Brian Hunter** received the Kingston Centre's A. Vibert Douglas Award, and **Susan Gagnon** received the Society's Service Award, as put forth by the Council of the Kingston Centre

Education. **Susan Gagnon** made a presentation to a local Brownies group, and Bruce Elliott acted as Judge in the annual Frontenac Lennox and Addington Science Fair; the Leo Enright Prize in Astronomy, consisting of $75.00 and a copy of *The Beginner's Guide* was awarded to the 2014 winners.

Observations. Members are encouraged to share their observations. Resources such as the library are made available for research and a Facebook page has been set up to publicize RASC Kingston Centre and share news and information, as well as an ongoing email list for sharing news and information among membership. The weather during the

President's Report 2014

Kim Hay

AS A SUMMARY for the 2014 year as President, I don't think I can state any more detailed report as our Secretary has presented in her report.

We have had some great opportunities this past year with the Torus project and the mirror re-coating. Also the RMC domes long term lease and dismantling project.

One or our biggest goals is to look for land, either purchased or leased for our future Centre activities.

We are accumulating equipment and it is not being accessed by our members; this is who the equipment is for.

We really need more involvement from our members in order to achieve our goals. Any help for any activity would be really appreciated. We have lost touch in our observing trips for members, and our outreach activities. Since we lost our Outreach with Queen's in the form of KAON events, we may need to re-think our Outreach goals.

In 2015, I envision a couple of Astronomy related road trips, and the search for land to be moved up in the top five of our list.

The Torus telescope is a project that is so close to being operational.

Our Executive has done a great job this year to keep our centre vibrant.

I want to personally thank them, and our members and volunteers who have helped in anyway this year.

Our membership remains steady at around 74 members. This includes Life, Regular, and Youth.

We are at all various stages in our lives and time is precious, but our love of Astronomy brings us together and we have camaraderie to share.

Let's go out and enjoy the stars and build our Centre together.★

Auditor's Report 2014

Doug Angle, KC Auditor 2013-14

THE ROLE OF AN AUDITOR is not to check each financial transaction, but rather to check that there are sufficient procedures and controls to ensure the health of the system. I have per-formed such a check, as well as sampling several transactions for conformance to these controls.

I'm happy to report that the financial affairs of the RASC Kingston Centre are in fine shape. The profit and loss statement accurately reflects the business throughout the year, and the balance sheet balances. I did find a single transaction that was mis-categorized, which would not affect the totals presented.

For the most part, the budget forms the basis of the Centre finances. Where activities are budgeted, expenses can be charged without further approval. Items exceeding budgeted amounts are specifically approved by the executive. It could be made a little clearer who has responsibility for budget line items, and when further approval is required, although there is no evidence that this created any problems in the past year.

Finally, my compliments to the treasurer on the clarity and organization of the financial records. In fact, any difficulties arise from external sources: receipts often have cryptic descriptions, reports from national office can be confusing, and Quickbooks has some interesting quirks in how it presents information. Beside those, the records of the Centre are nothing short of stellar.★

KAON Coordinator's Report 2014

Susan Gagnon

THE END OF 2014 has been made a little sadder with the end of our highly successful collaboration with Queen's and RMC that was dubbed KAON (Kingston Astronomy Outreach Network). The local Fire Marshall has serious concerns with respect to 4th floor egress in the event of an emergency and this cannot be ignored. Given the financial hard line of most institutions these days it is difficult to imagine that the appropriate funds will be made available for upgrades needed. Of course we have no idea what the future brings but the Ellis Hall sight for bringing astronomy to the public will be difficult if not impossible to replace. Listed here are the topics of some of the public lectures enjoyed in 2014:

- **Dr. Gregg Wade**: Earth v2.0: Have We Already Discovered an Earth-Twin Orbiting a Nearby Star?
- **Mr. Nathan Deg**: Our Galaxy, the Milky Way or why we think dark matter exists.
- **Mr. Matthew Chequers**: Riding the Waves: Why We Think the Milky Way is Ringing like a Bell from a Recent Collision.
- **Dr. Larry Widrow**: A beginner's Guide to the Inflationary Universe.
- Dr. James Silvester: Observatories of the world
- **Ms. Nathalie Ouellette**: The Life and Times of Galaxies.
- **Mr. Alexandre David-Uraz**: Hot Massive Stars: Rock stars of the Universe.

I have always enjoyed doing public observing events and will miss these opportunities. The 4th floor observing deck was a great place for people to sample the night sky in comfort and safety. It could get a bit

crowded with so many observers but this just seemed to enhance the experience. On those nights when we did have clear skies the atmosphere would be quite festive with a lot of chat in the lines behind the eyepiece. Often people would preface questions with some sort of apology for not knowing about astronomy but the questions got asked none the less. It is hard to look stupid when you are all standing around in the dark!

I have made the case for science outreach but now I would like to mention that these monthly public events are probably underestimated in their ability to foster good town/gown relations. Outreach events such as this are critical to the general population viewing the University as a resource open to them. A little 'Stockholm Syndrome' goes a long way!

A series of terrific Observatory Coordinators over the last 15 years has been essential. Without their efforts and their network of undergrad helpers the events would not have been the success they were.

Thanks to all who participated over the years.★

Thoughts on KAON

Nathalie Ouellette et al

The Queen's Observatory coordinator sent out this letter on October 29th:

Hey guys!

As promised, I am emailing you about the outcome of today's meeting with the fire safety coordinator. Without going into too many details, we've learned that there is no flexibility in the imposed 20 person floor occupancy, and that the 4th floor of Ellis Hall will be completely off limits starting May 2015. After having had the fire safety issues with the floor explained more explicitly, I have to say that I agree with this decision, but it pains me dearly that it's taking out all our outreach operations. While we can still have a few people at the Observatory at a time, we simply don't have the resources or manpower to work around these restrictions in the context of Open Houses, or even school tours. I wanted to let you guys know first before sending out an email to the mailing list.

Effectively, we are closed to the public until further notice. I'd be happy to talk about the meeting more in-depth if you're interested, but I don't foresee any short term solutions. Welp, this really sucks! I wanted to personally thank you for all the help and support you've given us, and me, over the years. The Open Houses would never have been possible without you. I'm very sad to have to see this all end this way. Operations may eventually start up again, but I will likely be gone by that time. It's been great, gang. Sorry it came to this.

Best, Nathalie

Kevin K: Thank you for the note. It is certainly a sad day. It is amazing how they are so stringent now when, through many redesigns, renovations and additions, the problem was untouched. I think that what the plan was, the 4th floor remains open to its existing population and its use as an observatory by small numbers of people until May.

Hank: Although I have not participated for quite some time it is very sad news to me just the same. In these times of media and Internet space imaging it is nice to know that people had a place to got to see the real thing, the simple Saturn and rings, the no-colour M42, etc. I could under stand this in a wooden structure with no alarm systems etc. but to me this is just damn silly. I don't want to debate it with anyone but to me the risk compared to the education and pleasure provided by the event is insignificant. SO SAD.

Walter: The only way to save KAON would be to move the talk to a lower floor and have telescopes set up outside (not ideal I know). Anyways, I guess we'll just have to wait and see how things develop.

Kevin K: We have talked about alternatives: *i.e.* still a public talk in a third floor room but then followed by what exactly? Looking through the eyepiece was always the big draw. Replacing it with a view through slooh.com or some other remote scope is not the same at all. Maybe a remote 'local' observatory with full two way a/v? Naw. It is still not the same.

Sidewalk telescopes (like we have done in the past): better than remote scopes but the light pollution down at street level would make only big bright targets possibilities.

Rick W: As it has been recently, everybody stands around on the 4th floor essentially in line for space in the small lecture room then for space in the observatory. Could we not all sit around downstairs in the auditorium and send small groups to the 4th floor as space in the observatory comes free? I'm not sure how the observing deck with the RASC scopes would work. I suppose people might go out there and stand around for hours causing a backup and preventing new people from coming upstairs.

Or we could do as Walter suggests. It would surely be better than nothing, or at least worth a trial period.

Susan: KAON was a great improvement over the waterfront for

...Thoughts on KAON

sure. And the cooperation with the students was really fun. The public came out in droves because it seemed so much safer.

Sidewalk sessions for me would be OK with my compact scope but for Dobs it would be a stretch to drag one into town and set up and tear down. Having the warm room as our scope garage was great.

Kevin K: Only the existing people with offices on the 4th floor can remain for now, and a small group of a few to use the observatory. No groups of public at all.

Come May 2015 I believe the offices must be shutdown and people moved out and that the observatory itself will not be able to be used...at all?

Kim: It is a very sad time for sure, It was great going out on the deck and talking to the public. I really enjoy those WOW moments.

I can see the Fire Marshall's viewpoint though. Perhaps they will build another stairway down to the third floor. But if Queen's has no money I am sure it is at the bottom of the list. Its a shame since there is a great new telescope there.★

...Observing Reports: November-December

...continued from page 6

forecast doesn't look good, with clouds all week.

Rose-Marie: I did drive down Unity Road to Collins Creek, there is a good view from there, but the TRAFFIC! People, it's Sunday night...go home! Stay there! Quit blinding me with your headlights! I'm just taking pics, nothing to see here, move on! Good view, but the DAMPNESS, that fog rose out of the marsh and chilled me to the bone.

It took a lot of tweaking of exposure and saturation to bring out the colours. You can just see that fog moving in. There was some very unladylike language around 11:00 p.m. when I took the dog out and could see the brightness lighting up the fog clouds, you just *know* we missed something good!

Guess I'll have to buy me another cable release after the holidays. It'll be like that can of acrylic paint I just bought, brought it home and the next morning I found the half can that I knew was kickin' around here somewhere.★

Torus Update

Just in time for Christmas, **Susan Gagnon** *fabric*ated a dust cover for the 16" Torus telescope because **Kevin K** asked for one and she "made it sew," though some may just see this as a big cover-up...

...Nov 13 Meeting

...continued from page 3

Cluster, and compared them each to a star map.

The meeting adjourned at 9:04 p.m. The new Centre Executive is:

President	Kim Hay
Vice President	Gregory Latiak
Secretary	Susan Gagnon
Librarian	David Maguire
Editor	Walter MacDonald
NAC	open
Directors	Rose-Marie Burke, Paul Winkler, Bruce Elliot★

...Secretary's Report

...continued from page 7

past year presented many challenges, many events such as the occultation of Regulus, two lunar eclipses, a partial solar eclipse, auroras and meteor showers were all obscured by thick clouds and rain or snow in the Kingston area. Although the April outdoor meeting was rained out and ended quickly, members used it as an opportunity to scout out the location for possible future gatherings. Clear weather was enjoyed during the Fall 'N'Stars event, and in spite of the trend of overcast throughout the year many members were able to share photos and reports of solar prominences and record large sunspots, meteors, ISS passes, lunar images, and time lapse sequences among other events.

Disappointment was felt when the much-publicized Comet ISON disintegrated on its passage around the sun, and although hopes were raised when predictions were made that the Camelopardalid meteor shower could possibly turn into a "meteor storm" this event only produced a weak meteor shower at best.★