

The NASA/ESA Hubble Space Telescope has snapped a striking view of a multiple star system called XZ Tauri, its neighbour HL Tauri and several nearby young stellar objects. XZ Tauri is blowing a hot bubble of gas into the surrounding space, which is filled with bright and beautiful clumps that are emitting strong winds and jets. These objects illuminate the region, creating a truly dramatic scene.

Image credit: ESA/Hubble and NASA. Acknowledgement: Judy Schmidt

## Reports and Other Items

### HUBBLE CONTINUES TO AMAZE!

Just when you think the Hubble Space Telescope has seen it all, it takes the coolest image yet: full of bubbles, light echoes, jets, disks, dust lanes, and variable stars. So of course, it just had to be on this issue's cover.

### WHERE IS FALL'N'STARS?

**Kevin Kell reports:** There was a question about the location of the Fall'N'Stars field. So we got 3 or 4 GPS units together and measured the location of the flagpole, and they

were all within the smallest significant digit of each other:

Latitude: 44° 23' 10" N

Longitude: 77° 18' 47" W

### RASC SPONSORS CSC

**James Edgar reports:** The RASC Board of Directors has approved a proposal that the Society will sponsor each of the 29 Centre Clear Sky Chart sites, including any observatories associated with the Centres (79 sites in all). We've asked **Attila Danko** to link our "ad" to the individual Centre home pages, but he currently

## Upcoming Meetings

**Thursday, November 13 7 p.m.**  
KC Annual Meeting

**Friday, November 14 8 p.m.**  
CAVE Memorial Lecture  
"The Accelerating Universe"  
Queen's U BioSciences Auditorium

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

**Thursday, January 8 7 p.m.**  
Regular Meeting

**Meetings** are held in Room 324 at Ellis Hall on University Avenue at Queen's University in Kingston, Ontario. [kingston.rasc.ca](http://kingston.rasc.ca)★

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

is unable to do that. What he will do is link them to this page:

<https://www.rasc.ca/centres>

We see this as a benefit to Centres, to members in general, and to Attila so that he can continue to provide this valuable service.

It also means the the RASC will become one of the three top sponsors on every page, including the CSC home page.

### 25 YEARS AGO

October 20th was the 25th anni-

Continues on next page...

## ...Reports and Other Items

versary of **Clyde Tombaugh**'s visit to Kingston. There is audio of **Leo Enright**'s introduction at:

[rasc.ca/leo-enright-19891020](http://rasc.ca/leo-enright-19891020)

**Ian:** I remember that evening so clearly. I'll always remember Dr. Tombaugh talking of his efforts, as a young man, of cleaning the roof off the observatory in winter and commenting that it was a "snow job."

**Paul:** I was a member of Edmonton Centre at the time, and Clyde Tombaugh gave a talk there as well; the introduction was given by **Al Dyer**. It was an excellent talk!

### OTHER ITEMS

The centre's website was upgraded to Drupal core 7.32 on October 16 and 7.33 on November 8. ★

## 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.

## Orbit: Under the Stars, October 8 Susan Gagnon

From October 17th to November 1st, the Drama Department performed "Orbit" by **Jennifer Wise**, a play based on the daughters of famous astronomer, **Galileo Galilei**. Inspired by the letters Galileo's daughters sent him from the convent, *Orbit* was written as part of the International Year of Astronomy.

ORBIT: UNDER THE STARS, *An evening of discourse and stargazing at the Queen's Observatory.*

The 9 p.m. start was delayed slightly due to a midterm exam in progress in Ellis Hall auditorium, but things soon got underway and there was a healthy turnout of several dozen—I think mostly from the drama department.

I attended this event and it was

great! **Dr. David Hanes** did a great introduction to the life and works of Galileo and the web interview with the playwright was a hoot. **Jennifer Wise** read all that she could get her hands on to research the project from biographical works to correspondence. She is a very interesting and engaging writer. Dr. Wise is an associate professor of theatre history and the coordinator of the graduate program in the Department of Theatre at the University of Victoria.

The observing part of the evening was a bust due to cloud, but a show of hands revealed that there were just enough people interested in a dome tour to comply with the Fire Marshall's orders for occupant limits! [*They did open the dome and spin it around a bit.—Ed.*]

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## RASC-KC Board of Directors

- President:** Kim Hay
- Vice President:** vacant
- Secretary:** Rose-Marie Burke
- Treasurer:** Kevin Kell
- Librarian:** David Maguire
- Editor:** Walter MacDonald
- Nat'l Advisory Council Rep:** vacant
- Director without Portfolio:** Paul Winkler

## Committee Chairs/Coordinators

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

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## Meeting Report: October 9

Kevin Kell

The RASC Kingston Centre—a.k.a. Astronomy Kingston, a.k.a. Kingston Astronomy Club—met in Ellis Hall room 324. Attendance was lower than normal—about 18 people—likely due to the pending Thanksgiving weekend.

A table of freebies was setup outside the room and at least half of the material was picked up (solar eclipse glasses, IYA solar cards, flashlight red material and elastics,

business cards, brochures, Starfinders, Moon Guides, and more!

### ANNOUNCEMENTS

**Kim Hay** opened the meeting with introductions and announcements of upcoming events: KAON, observing sessions at Maberly and the North Frontenac Dark Sky Site, the partial solar eclipse (at Murney tower in conjunction with **Melanie Hall**,

National Museum Science & Technology), and the L&A Dark Sky site, the NAC meeting and our own annual meeting and elections in November, and finally our annual Christmas dinner at Aunt Lucy's in December (there is no regular Centre meeting in December).

In Centre Bylaw revision news, work continues and volunteers are welcome. There is no motion from the Ontario Centres Bylaw group. A

Continues on page 9...

## KAON Report: October 11

Paul Winkler

KINGSTON WAS CLOUDED OUT early, but sort of cleared later in the evening. The KAON (Kingston Astronomy Outreach Network) Open House on Saturday evening did not include any observing because of the Fire Marshall's statement about the number of people allowed on Ellis' 4th floor, but it wouldn't have happened anyway due to clouds (what else is new at KAON!?). The presentation in Ellis Hall was attended by 32 visitors, including 3 regular attendees at our RASC meetings. The low turnout was likely because of Thanksgiving weekend.

The presenter was **Alexandre David-Uraz**, from Montreal (but now researching in Kingston.) His

topic was "Hot, Massive Stars: The 'Rock Stars' of the Universe." For the most part he concentrated on stars of Spectral Class O, with some info on B's and A's as well. He cleverly drew a parallel between these stars and rock stars who are flashy and intense, but tend to have short lives. He also pointed out that these huge stars can, through their fusion reaction, produce elements down to iron, thus producing the materials needed to form rocks! Mr. David-Uraz touched on Wolf-Rayet stars, supernovae, neutron stars, magnetars, and finally black holes. All of these can be the fate of hot massive stars. He included many interesting bits of info in his talk: 95% of the

light emitted from active galaxies is from hot, massive stars—these stars last about 10 million years (vs. over 10 billion for our Sun)—hot massive stars make up about 5% of the stars in our galaxy—these stars have enormously powerful solar winds—eta Carinae, a Class B star, emitted mass equivalent to 10 million Suns during the 1830's! The audience had four questions, including two on black holes, one on neutron stars, and one about potentially dangerous cosmic radiation emitted by hot massive stars. It was a most entertaining talk, and not nearly as "technical" as a member of the public might have thought. It seemed too short! ★

## National Advisory Council Meeting: November 8

Kevin Kell

I SAT IN ON the RASC's National Advisory Council web meeting Saturday 2014 November 8 from 11:00-14:00. My opinion is that it was mostly a waste of time. There were very few reports tabled in advance; very few reports were tabled period [or posted on *rasc.ca -Ed.*]. Many were read out in real time. There were no motions (except to accept the previous minutes and to adjourn). There was very little debate. There were very few questions. It was mostly about chatting with others. I am disappointed.

What news did come out of this:

- ▶ It took 15 minutes to get WebEx connected to the meeting, I tried under various web browsers, addresses, URLs etc. It was very frustrating.
- ▶ The Handbook *will* be coming out in digital format...sometime...it will be protected in some fashion (Digital Rights Management) and it will not be free.
- ▶ Work is ongoing for a 2017 total eclipse brochure.
- ▶ Work is ongoing on a small observatories publication.

- ▶ Work has stopped on the next *Beginners Observing Guide*, work has started on a much smaller version of it as a guide to the ETU certificate program.
- ▶ IT is going to replace office computers and Exec Dir laptop.
- ▶ Donation of two large monitors by **Colin Haig** so staff have two monitors on their desks.
- ▶ National office space is too small. Looking at other options.
- ▶ No movement on Ontario bylaw reform

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THU/FRI, OCTOBER 2/3

**Rick W:** After observing the Moon for a couple of hours in the evening then typing my observations into the computer I decided to go for a post-midnight paddle. The sky was quite dark, the Moon having already set, but there was thin patchy cloud so the transparency wasn't very good. But it was very calm and quiet. As I was returning to the dock at 0122EDT, there was a bright **double satellite** passing through the bowl of the **Big Dipper**. When I first glimpsed them they were about the midpoint of the upper edge of the bowl and shining about 2nd mag. Over a minute or two they moved down in perfect formation, one following the other, passed almost exactly over **Merak** and then faded to invisibility. They were (very roughly) 1° apart. Heavens Above doesn't show any satellite passes at all for that time of night.

Since the night was so calm, I went back down to the dock a half-hour later and shot a few pictures of rising **Orion** reflected in the lake. Sure was purty!

WEDNESDAY, OCTOBER 8  
LUNAR ECLIPSE

**Kevin K:** Grrrrr...no total lunar eclipse in Yarker. There is live coverage with audio interviews and commentary at slooh.com

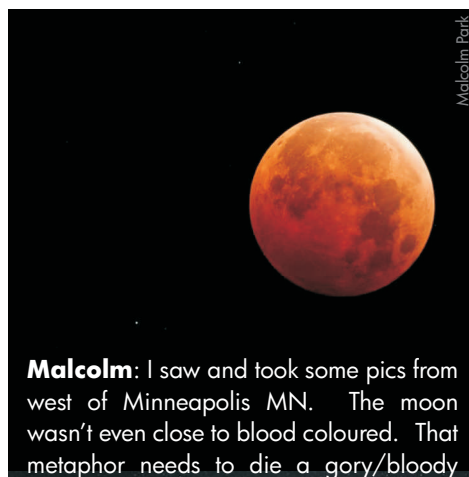
**Mark K:** Unusual here [*Georgetown*], it cleared in time for the



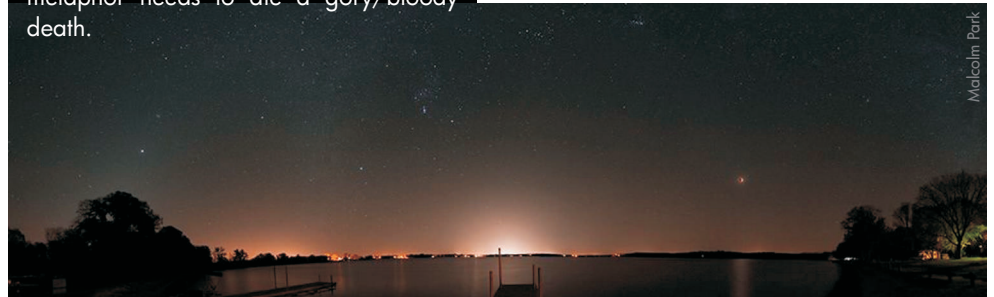
eclipse and then clouded over after sunrise. Uranus is the brighter of the pair to the left of the Moon.

**On RASCals:** I spent a large amount of time swearing at my camera. Eclipse was very nice and true to my rule, the amount of planning is inversely proportional to the likelihood of clear skies.

I awoke with a start at 0400 and remembered there was an eclipse, got up, checked the cloudy skies and went back to bed. Did not fall asleep, got up again and noticed that I could see shadows from the Moon. Grabbed gear and headed to a football field (soccer to heathens) west of Gtown and set up rapidly, first unable to reach focus and then remembering I had an extension tube in the set up, took everything apart and back together in the dark and finally was able to focus. Then I could not get the darn 7D to shoot below 1/60 of a second in live view. So I had to shoot with mirror slap. At least I had it better than the woman who showed up breathlessly hauling her camera and tripod out of her car



**Malcolm:** I saw and took some pics from west of Minneapolis MN. The moon wasn't even close to blood coloured. That metaphor needs to die a gory/bloody death.



just after the Moon had set. She was a Nikon user and could not help me with my live view problem, even if she had been on time. Lovely orange Moon as it faded away into the thickening haze and brightening skies.

Unlike the usual weather pattern, it cleared for the eclipse and then clouded back over after sunset. I hope others had the same luck.

**Richard W:** View from Sandhurst Shores: Cloud-Cloud-Cloud around all four compass points. The only way I knew the eclipse was occurring, the thinner clouds that let some light through—darkened. This is my third attempt to see a Lunar Eclipse. Maybe next time!

**Rose-Marie:** Totally clouded out here in Perth Road: got up 3 times to check, socked in thick clouds. Argh.

**Walter:** I am up in Oshawa, but didn't bring a telescope because the forecast was not good. The radio kept saying it was clear in Toronto and to go out and look at the Blood Moon. It was overcast here, but by shortly after 6:00 I could see the moon and some red colour through the thinning clouds.

After 6:30 we were up to about 1/3 clear sky but the Moon was fading in the foggy haze hugging the western horizon. [*It appears that everywhere east of the GTA was clouded out for this eclipse.*] Anyways, I am happy because I at least got a few peeks at totality, unlike the last total eclipse where the cloud was also total. I also got my mom out to see it (she is an early riser), but

made no effort to rouse the neighbours...

SUN/MON, OCT 12/13

**Walter:** I was up at the farm on Sunday. It was a lovely sunny fall day with lots of great colours on display. The electric fence was on and the cows were grazing contentedly. Since the season is closing in I decided to go back and check on the observatory site one last time before winter. It's good that I did. It looks like someone tried to break into Doug Clapp's dome. The upper shutter door as disconnected and pushed to the back, and the lower shutter door was mostly detached from the dome (the steel cable may have complicated things for them). I'm guessing that once they saw there was nothing of value inside they gave up. So I decided to do an emergency dome-ectomy. Fortunately I was able to find slot and Robertson screwdrivers along with a socket set at the house and had the dome disassembled (good thing it wasn't windy!) by sunset. I carried the pieces up to the house in the growing darkness. Thank goodness I drive a wagon, so I was able to bring the dome pieces back to Winchester with me for restoration—all are quite dirty (also with lichens growing on them) and need a good cleaning and polish. This dome is 21 years old after all. (Come to think of it, my own house-top dome is 11 now and could also use a good polish.) The sky was incredibly clear (at the farm, and all the way back, and at Winchester), and here I was without a telescope! Still, it was wonderful to watch the stars come out and see [Sagittarius](#) one last time this season. The air was perfectly still too, without even a hint of a breeze. On my way back along the 401, I saw a very orange waning gibbous [Moon](#) rise at a quarter to ten. Needless to say, I was too tired to

observe when I got back.

SAT/SUN, OCTOBER 11/12  
MABERLY STAR PARTY

**Background from Susan:** This is for anyone who wants to observe and is a zero budget event. Location: Maberly Fair Grounds, 4883 County Rd 36, at the Hwy 7/Road #36, (Bolingbroke Rd.) junction ~1/2 km south of highway 7.

**Susan:** Thanks for coming out Brian. So when we all arrived it was cloudy, sometimes thicker than others. But this was expected. Fred had arranged the coffee, and the sandwiches looked great. At 5:30, after setting out some observing station markers so no one would steal my spot, Brian and I headed across the highway to the restaurant for dinner. I did not want much but needed something hot and would get a sandwich from the canteen for later on in the observing session. The food is great at the Fall River Restaurant! We had a good beer too. Just when we were ready to head back to the fairgrounds, Fred

came in to say that it was cloudier than ever and everyone was packing up.

The volunteers from the Maberly Agricultural Society, a few locals with a casual interest, and Fred and his observatory neighbour seem to be the only ones that showed up. Yes it was cloudy, but it was predicted to clear.

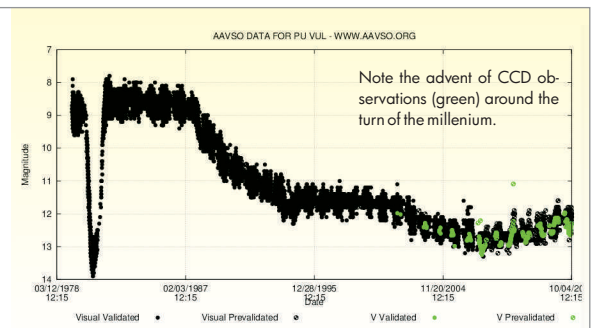
We went along with Fred to Bob Hilliers' observatory to check it out. While in the dome we could hear a short burst of heavy rain. There was no indication of clearing so Brian and I began our trek south. After 45 minutes on the road I regretted two things: not waiting out the storm (because it looked like it was going to get really clear), and not getting back to the canteen in time to buy enough sandwiches for the work week ahead!

David was pretty surprised to see me home as he had just checked the radar and was emailing his brother that it looked like I would have a good night of observing. Well I am now going out into the wilds of my own back yard to see if I can do some

## PU VULPECULAE

As you can see from this 13,000 day light curve from the AAVSO, this nova is notable for the dip that occurred soon after maximum light. Since then it has exhibited constant short-term variability in addition to longer-term trends in brightness. As **Rick Huziak** notes, there is a lifetime's worth of interest here!

**Rick Huziak:** PU Vul. Judging by its name, this star should stink, but it certainly does not! This nova appears at the end of the 1970's just after I joined the RASC and changed the shape of the Coathanger for a few weeks. It rose from 17th magnitude up to 8th, taking a few years to reach its peak in 1979. In early 1980, it crash-faded down to 14th mag and then recovered completely up to 8th,



oscillated by about a magnitude for many years, then slowly faded to 13th and now is brightening again (after 35 years!) to around 12.5 magnitude.

Plot the star's light curve for the last 15,000 days to see what it did, and what a good job amateurs did in covering this star over the last 3.5 decades!

Cool, huh? It's stars like this that remain exciting for lifetimes! ★

observing.

P.S. The gift shop that sells the chocolate is closed for now but should open again in a couple of months.

## SUN/MON, OCTOBER 19/20

**Kevin K:** We were out Sunday evening from 19:00-20:00 EDT trying to get an observing session in on Mars and comet Siding Spring C2013/A1, which was very near Mars, both orbitally and optically.

We had mostly cloud. And then more cloud. And finally total cloud. Clear Sky Chart showed all clear but that we were on the edge of a system that must have moved over a little bit more than it was supposed to.

No Siding Spring comet at all. Other observer reports indicate 16" scopes visually had trouble picking it out. We were using an 8". There was no chance of camera imaging either because of the cloud.

We had to move the equipment out from the observatory into the back field to get a good southwestern horizon. that is a lot of work!

The next observatory will have much better horizons :) Then none of the equipment will ever have to be moved again.

**Kevin F:** I wasn't planning on seeing it, but I was awake in time to see what others were looking at. The comet was very faint; I'm glad I didn't stay up to watch the show.

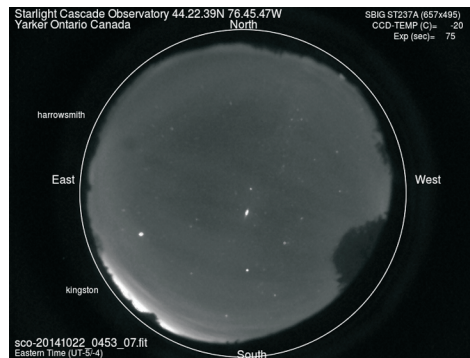
It got clear here, for a bit, so I used the CCD camera to make some obs of two US military geo sats.

**Rose-Marie:** Just at dusk a cloud bank rolled in from the west, so that spoiled plans to look for Mars. It also spoiled plans to set up the camera to run a series to see if I could catch Orionids.

## TUE/WED, OCTOBER 21/22

**Kevin K:** Just had one really good

Orionid meteor the night of Tue/Wed Oct 21/22 on the AllSky1 camera system. There were two other, dimmer ones but for the most part: cloud, cloud, and cloud.



There was not much from last night (Oct 22/23), but it sure looked nice and clear out!

AllSky2 has been down (burnt out) since August 22nd but we are expecting a new system any day now.

## WEDNESDAY, OCTOBER 22

**Kevin K:** Another X-class flare, this time coming from AR2192. Oh wait—it's still cloudy and raining here. Never mind.

## THURSDAY, OCTOBER 23 SOLAR ECLIPSE DAY

*Beautiful sunshine was the order of the day early on, and then...*

**Susan (14:48):** I cannot believe it! It was so beautiful earlier!

**Walter (16:18):** There is a system east of us that is pumping in the cloud.

**Mark K (17:42):** Very nice here at



Point Clark on the shores of Lake Huron. My first eclipse in H $\alpha$ .

**Hank:** H $\alpha$ ! How did you like it?

**Kevin K:** Total and complete cloud out. There was a thin 1° sliver of clear sky at the western horizon teased us all the way into first contact at 17:40. Nada. No sun anywhere. The camcorder that sees IR nicely saw nothing either.

There were about 20 people out, more telescopes and hosts than public clients. Melanie Hall from the Ottawa Sci & Tech museum was there with 3 or 5 helpers. They split up to the downtown hotel with Stephane and the astro conference folk and some came back to the waterfront with us.

It was good to see David Maguire, Richard Weigand, Susan Gagnon, Kim Hay, Nathalie Ouellette from the Queen's Observatory, and the Ottawa folks there.

Did I mention totally clouded out?

**Brian:** P off! Clouds galore here. The Sun didn't even have the decency to appear through the very thin clear sliver on the horizon.

**Rose-Marie:** You didn't have to mention it. You'd think with all the foul language I was using today I'd 'ave cussed a blue streak into the sky, but no. Just our classic bad-weather-during-interesting-astronomical-event bad luck.

**Brian:** There is a tide in the affairs of men which leads on to fortune... Shakespeare, dude. Unless they are astronomers...in which case it leads to obliterated skies. I can out-swear any of you; deck hand on a tugboat dude. I did enjoy the company, which is all that matters.

**Kevin K:** At left is an image of the partial solar eclipse of the Sun, taken from the Kingston waterfront near the Murney Tower Museum, at King & Barrie. It is looking approximate west southwest or about 240–250° azimuth. The tiny sliver of sky was

THE TABLE BELOW is a six-year summary of newsletter production.

Year	Issues	Pages	Notes
2009	10	117	
2010	11	93	
2011	8	87	November issue produced by Kim & Kevin.
2012	8	78	
2013	11	111	One issue of Ridiculous (first in 20 years!).
2014	6	76	Projected whole-year numbers.

2014 has seen a lower number of issues and pages than previous years. The nominal (monthly) cadence is a punishing one and has been a difficult one to try to meet over the long run. Superimposed on this are periods of low activity in the Centre. Some may think such low periods are a bad thing, but really they are only

natural—even when not accentuated by a shortage of volunteers. While the past brutal winter (and cool spring) may have put a dent in the first half of the year, the Centre bounced back with a vengeance, just as it always does. Rather than fretting about the low part of these cycles, we should just enjoy the ride.

Your editor's opinion has always been that quality (and relevance) are more important than quantity, and so we have sometimes had smaller issues or months with no issues. A combination of listing events in the newsletter a month or two ahead, combined with postings on the Centre's website and email list ensure that nobody will miss out on



Newsletter issues for 2014.

any time-sensitive news or event announcements. Living in the Internet age has its benefits.

In closing, I would like to thank everyone who has contributed material to *Regulus*, either directly or indirectly (via the email lists). Obviously, without these contributions the newsletter would not be possible. ★

# Webmaster's Report

IT TOOK A BIG 3-MONTH PUSH starting in the new year, but the Centre's website was finally ported over to Drupal 7, going live on March 30th. There may be a tiny bit of content to still come over (such as a few private files) but the job is otherwise complete.

Many hundreds of images were ported in a collection of image galleries. It is now possible for members to have their own galleries too. The only feature lacking is the ability to have nested galleries, but perhaps an easy fix for this may be

found in the future.

The old website has been archived for reference use, and information on how to access this is in the members-only area of the new (current) website.

As usual, thanks go to our servermeister **Kevin Kell**, who has managed the backups and replaced server hardware and software as required. Kevin was a little busier this year since he also did the Drupal install (and updates—we are now up to version 7.33) as well as the module installs. ★



our last best hope for a view of the eclipsed sun, and it did not happen. This image was taken at 17:44 EDT, during the eclipse and approx 23 minutes before sunset.

FRIDAY, OCTOBER 24

**Rick W:** Just went out for another quick look at AR2192. I don't think I've ever seen as large a **sunspot**. It's spectacular, STUNNING, AWE-

SOME, BREATHTAKING! Hope some of you are getting images. I took a few white light images earlier today but the seeing wasn't very good—took them mostly as a record. I haven't got time for pictures now. Hopefully it will still be on (or back on) the disk next month when we get our next sunny day.

**Walter:** Thanks very much for this email! I dashed right outside with my eclipse glasses and was easily

# ...Observing Reports: October

able to see the spot naked eye not far off centre. Then I went across the street and showed four neighbours, who were all very impressed.

**Kevin K:** Awesome. I was in the parking lot of the Kingston Centre and saw the sunspot with naked eye and eclipse glasses, then turned the video camera on it with the Baader filter and got some video...much like we were SUPPOSED to have yesterday. ★

THE 2013 ANNUAL GENERAL MEETING of the RASC Kingston Centre was held on November 14, 2013, starting at 7:08 p.m. 16 present. The centre has 70 members. New members were welcomed. Thank you to the award winners, and to **Susan Gagnon** for being the President for the last four years, and taking on extra duties.

## AGENDA

- ▶ Welcome
- ▶ Presentation of Agenda
- ▶ Approval of Agenda
- ▶ Approval 2012 AGM minutes
- ▶ Reading of annual reports:
  - ▶ President
  - ▶ Secretary (report and approval to update at year end.)
  - ▶ Treasurer
  - ▶ Library
  - ▶ National Advisory Council Representative
  - ▶ Editor
- ▶ Centre Elections
  - ▶ Secretary
  - ▶ Librarian
  - ▶ Editor
  - ▶ National Council Representative
- ▶ Adjourn with thanks.

- 1) Approval of the Agenda. Motion 2013111401: moved by Susan Gagnon, seconded by Paul Winkler. Carried.
- 2) Approval of 2012 AGM Minutes. Motion 2013111402: Susan Gagnon moves the minutes from 2012 AGM be accepted. Seconded by Richard Wagner. Carried.
- 3) No President's Report; it will be in the January 2014 *Regulus*.
- 4) Secretary's Report. Motion 203111403: approval moved by Kim Hay, seconded by Susan Gagnon. Carried.
- 5) Treasurer's Report and Auditors Report: Finance reported a balanced budget. Donations of \$1528 for 2012. Equipment List was presented. Motion 2013111404: moved by Kevin Kell, seconded by Susan Gagnon. Carried.
- 6) No Librarian's Report.
- 7) NAC Rep: no report; position was vacant.
- 8) Editor's Report: online (as are other reports) at [kingston.rasc.ca/governance/annualreports/2013](http://kingston.rasc.ca/governance/annualreports/2013). Motion 201311145: Walter MacDonald moved to accept. Seconded by Susan Gagnon. Carried.

- 9) A.V. Douglas Award: The Executive Awards Committee has nominated Brian Hunter. A copy of the nomination citation and award will be presented to Brian, when he is present.
- 10) Webmaster's Report: Motion 2013111406: Moved by Walter MacDonald to accept report, seconded by Susan Gagnon. Carried.

## ELECTIONS

President: Vacant  
Vice President: Vacant  
Treasurer: Kevin Kell  
Secretary: Kim Hay  
NC Rep: Vacant

(no nominations from the floor)  
Kim Hay resigns as Secretary; Rose-Marie Burke nominated for Secretary, to complete the 1-year term as Secretary. Accepts. Kim Hay becomes President, accepting a 2-year term. Auditor for 2013 is Doug Angle, who was acclaimed.

Meeting adjourned at 7:58 p.m. by Susan Gagnon, seconded by Rich Wagner. Paul Winkler to come on the board, with no portfolio. ★

...continued from page 3

- ▶ 2018 is the 150th anniversary of the RASC—no coins or stamps from the Mint or the Post. They are looking for something else to commemorate the occasion.
- ▶ New astrocanada website initiative shelved.
- ▶ Some possible activity on the education group front: new Youth Group membership-type proposal, teachers kit, etc.
- ▶ Family membership review: it is not actually losing money as many thought; it is actually paying for itself. Thoughts about moving from a per extra person fee to a flat rate?
- ▶ Minor changes to the Public

- ▶ Speaker Program.
  - ▶ Astronomy Day collaboration with *SkyNews*: on their website? on a new website?
  - ▶ Light Pollution Abatement Committee: finally looking to start public education activities.
  - ▶ Possible 2017 Solar Eclipse trip planning?
- The big financial pie chart was brought up again—and there is still no explanation for centre activities being \$34 out of \$70 fee. We get only \$23. How else do they service a centre? Liability Insurance. Not much else.  
\$11 for staff at National Office, \$10 for *SkyNews* magazine, \$6 for the

## ...NAC Meeting Report

*Observer's Handbook*, \$3 for NAC travel and teleconferences, \$1.62 for banking and credit fees, 63¢ for the Education Committee, 54¢ for the Awards Committee, and 19¢ for the Annual Report.

They also included the speaker program, but it is funded separately, as in the Hogg and Northcott lectures (they come from trust funds, not membership fees). It was pointed out that very little \$\$ is actually going to astronomy.

Kim suggested we analyze our own finances and present something similar.

All in all, there were a few items of small hope. ★



possible partnership with MacLachlan Museum is being looked at. Our April 2015 meeting has been booked at this location, since we are unable to be at Queen's that month. This will also give us a chance to do some observing in their nice back field, so bring your binoculars and telescopes. We will measure the sky brightness when we are there as well.

Observer's Calendars and Handbooks have been ordered, but have not yet arrived. Expect to see them at the November meeting.

The RMC domes project is on hold until we hear about the status of the fence and access procedures.

MAIN SPEAKER

Kim then introduced our guest speaker, RASC archivist **Randall Rosenfeld**. Randall gave an hour long presentation on "What's in the constellation Crater, how Newton got fifty bottles of champagne, and when Halley drank brandy and swore—the surprising history of astronomy and alcohol," which covered from 15000

BC to present day. It made us feel much better about ourselves! We had some Q&A afterwards, and presented Randall with some lovely parting gifts before moving to a 5 minute break.

After the break, we had 6 door prize draws and then moved to member presentations from: **Rick Wagner, Richard Weigand, Leslie Roberts and Kevin Kell & Doug Angle**. Both Doug and Walter took home some video imagery of the Hartmann mask used on the Venor 60cm telescope at Fall'n'Stars with an eye to do some quantitative analysis on them.

**Richard Weigand** is now 50% of the way through the Isabel Williamson Lunar Certificate Program! He may be the first Kingston member to complete it! Of note was the <http://wms.lroc.asu.edu/> website with some high resolution lunar maps.

The meeting adjourned late and a group of ATM enthusiasts stayed even later discussing various Torus and other telescope issues including

Raspberry Pi computers.

COMMENTARY

**Hank:** Just my luck to have not been able to attend such worthy subject matter!

**Walter:** Randall and I arrived in Oshawa at 01:30 (we were talking with Brian, Doug, and Rick after the meeting until 23:30!) and we had a nice mellow morning to get going again. I dropped Randall at the GO station at 11:00 for a train back to Toronto. The 11:08 train was waiting when we got there, so that hopefully minimized his downtime. I think we both enjoyed ourselves immensely during this whole adventure!

**Randall:** I had a great time last night; it was a fine (and appropriate) choice of pub, I enjoyed the presentations at the meeting, and being introduced to my fellow RASC members. Size matters far less than quality, and as far as I'm concerned Kingston Centre benefits from the latter. Needless to say, Walter and his mother were exemplary hosts. ★

KAON: The End of an Era

Kevin Kell

ON FRIDAY, NOVEMBER 7TH, we picked up the last of the RASC-KC equipment housed at the Queen's University Ellis Hall Observatory. This marked the end of the Kingston Astronomy Outreach Network (KAON) open houses and public observing sessions.

KAON first started back on 2003



November 9. Our records show that it was a total lunar eclipse, that we had 8 member volunteers on hand and 300 members of the public. Since then there have been 11 years of mostly continuous sessions with a break here and there for various issues such as construction, renovation and conferences.

Adding up all of the public contacts over those years and we run into the tens of thousands. The list of presenters and volunteers has been tremendous and we want to take the time to thank each and every one of the volunteers who have come out in the cold and wind to share the eyepiece with others.

Thanks also to the Queen's Observatory Coordinators:

- 2011-2014 Nathalie Ouellette
- 2009-2011 Melanie Hall
- 2008-2009 James Silvester
- 2004-2008 Terry Bridges
- 2001-2004 Otto Mehes

and to the RASC KC Coordinators:

- 2007-2014 Susan Gagnon
- 2003-2007 Kevin Kell ★

The Leonids will be quite a storm  
In '99 when they show their true form  
The bolides a-blazing  
It'll be quite amazing  
And they'll keep on going 'til morn!

*As it turns out it, 2001 was the year of the big Leonid storm, but it was worth the extra wait! 2033 anyone? And speaking of Leonids... =>*

## Blast from the Past: The 1833 Leonids from Whitby

Thomas Conant

ONE OF THE MOST IMPORTANT occurrences of the time, and one from which many reckoned their local history, was a remarkable display of falling meteors. The following account is taken from memoranda left by my mother, and as told by my father

On the night of the 12th of November, 1833, my father, then a young man, was salmon-spearing in a boat in the creek, at its outlet into Lake Ontario, now Port Oshawa. One of his hired men sat in the stern and paddled, while he stood close beside the light-jack of blazing pine knots, in order to see the salmon in the water. He, in common with the inhabitants generally, was laying in a stock of salmon to be salted down for the year's use, until the salmon "run" again the following fall.

At or about ten o'clock of this evening, as nearly as he could judge, from out of an intensely dark November night, globes of fire as big as goose eggs began falling all around his boat. These balls continued to fall until my father, becoming frightened, went home, —not forgetting, he quaintly added, to bring with him the salmon already caught. On reaching home, Lot 6, B. F. East Whitby, the whole household was aroused, and frightened too; but the fires ceasing they went to bed, to pass a restless night after the awe-inspiring scene they had witnessed.

Getting up before daybreak next morning, my father raked over the embers of the buried back log of the big fire-place and quickly had a blaze. Happening to glance out of the window, to his intense amazement he saw, as he said, "the whole sky filled with shooting stars." Quickly he called to the men, his hired help in the

lumbering business, to come down stairs. They needed not a second invitation, and among them was one Shields, who, on reaching the door, dropped in a twinkling upon his knees and began to pray. The balls of fire continuing, his prayers grew more earnest, if vigor of voice could be any index to his religious fervor.



WORLD TO COME TO AN END. STARS FALLING, 1833.

Of the grandeur of the unparalleled scene my father said almost nothing, for I am led to think they were all too thoroughly frightened to think of beauty, that being a side issue entirely. The fiery shower growing more dense, my father went out of doors and found the fire-balls did not burn or hurt. Then he went to a neighbor's—a preacher of renown in the locality having to pass through woods, and even in the darkness, he affirms, the fire-balls lighted his way quite distinctly. The preacher, already awake, was seated at the table beside a tallow dip reading his Bible, with two other neighbors listening and too frightened, he said, to even bid him good morning. He sat and listened to verse after verse, and still the stars fell. The preacher gave no explanation or sign, but read on. Looking eastward, at last my father saw a faint glimmer of breaking day. Once more he came out into the fire and made his way homeward. Before he reached there daylight

broke. Gradually the fire-balls grew less and less, and, with the day, ceased altogether. To find a sign of them he hunted closely upon the ground, but not a trace was left of anything. Nor was any damage done. What became of the stars that fell he could not conjecture.

Realize that in 1833 astronomers had not taught Upper Canadians in regard to meteoric showers, as we know to-day, and we do not marvel at their consternation and fright. Such was the greatest meteoric shower the world probably has ever known. Its greatest density was said to be attained in this section of the continent.

A bit of doggerel went the rounds at that time. It was made, I believe, by one **Horace Hutchinson**, a sailor whom my father had on one of his schooners. Here is the first verse:

"I well remembered what I see  
In eighteen hundred and thirty-three,  
When from the affrighted place I stood  
The stars forsook their fixed abode."

A better sailor he was than a poet, and yet, bad as the verses were, they were very popular in the thirties in a large section of the Home District, of which this is a part.

**E. S. Shrapnel**, the artist, paints the picture (page 144) from an actual photograph of the house, he obviously supplying the kneeling man. Shields, who made so great a fuss, was employed by one of my father's foremen at the lumbering, and the picture and its story are true in every essential particular.★

Taken from *Upper Canada Sketches*, by Thomas Conant, 1898 (pp. 54-57). An original copy of the illustration here was recently obtained for the RASC Archives from the Oshawa Historical Society.

## RMC Dome Project

Kevin Kell, Hank Bartlett

TWO DOMES AT RMC, a 16' Ash dome and 7' Astro Haven dome, have now been successfully dismantled and moved. The Centre has a long term loan agreement with the Royal Military College for the use of these two pieces of equipment going forward.

On Saturday, October 25, seven Centre volunteers spent six hours dismantling the 16-foot Ash dome. We had a couple of visits from the Physics Technical Officer, who took possession of the battery and lower shutter motor assembly, as requested. Our transport fell through for that day, so we broke off at 14:00. Six minutes later the skies opened up and rain fell for most of the rest of the afternoon.

On Sunday, six Centre volunteers spent five hours loading, transporting and unloading the 16' ash dome pieces and then returning to load, transport, and unload the Astro Haven dome as well.

At its widest, the Astro Haven dome is almost 8' across. The truck opening was only 7' 2". We had to take it apart and quickly on Sunday and with a little squishy, the main body fit through...barely. This is a manual-open clamshell observatory that requires complete replacement of the weatherstripping before it can be operational again.

Before we got the 17' truck (which is only 14' on the inside, unlike the Tardis, which is bigger on



the inside) I mistakenly thought maybe we could get everything (both domes) inside in one load!

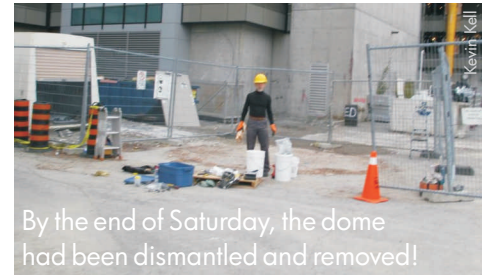
This was a huge project of the like we have never had the chance to attempt, ever. Everyone who could make it I think learned a lot in observatory design and manufacture of domes in general, and of Ash domes specifically.

The large phase of this project is over. The small 7' Astro Haven dome has to go through retrofitting and next summer we will see if it is suitable to house the 20 cm LX-200 telescope.

The larger 16' Ash Dome is another story. It is a big and beautiful dome that would wonderfully complement a large pier mounted telescope like the 40cm Torus. But it requires firstly, land to put it on and secondly a building to put between the land and the dome. Feel free to sit down with paper, pencil, calculator and some imagination to design and cost out a structure that could hold the dome. Basically a building big enough to put it on. I am curious how the interface between the round dome bit and the square building part works.

And again, keep your eyes and ears open for land for an observatory site for the Centre. We can afford \$5-10k at the moment and I think you all know the kind of land we would be looking for:

- ▶ The more land the better and the higher the better.
- ▶ The fewer close neighbours the better.
- ▶ Good horizons all around.
- ▶ Not too far away from the Kingston area and yet not within the city



limits or close by loads of local light pollution.

- ▶ Preferably an outright purchase, followed by long term lease, followed by long term use of a third-party property.
- ▶ It needs to be able to park up to a half dozen cars give or take, have room to build a roll off roof observatory for the smaller scopes, a warm room, a storage shed, and over time observatories for the bigger scopes (the 60cm Venor Dobsonian, the 40cm Torus).
- ▶ It does not need to have HydroOne power, we could generate our own.
- ▶ It would be nice to have short trees around the perimeter for blocking direct local lighting from neighbours, traffic, etc.
- ▶ If it is land loaned, leased or allowed use of from a person, a separate access way would be good.

Thanks to all again!

**Hank:** First of all my condolences to my fellow participants in the Heavy Metal Dome Project for the loss of muscle tissue (at our age we do not rebuild it) and the mental/emotional stress they endured throughout.

My part in the HMD Project was that of a labourer, however there are those that went far above and beyond in organizing and directing this event. It may be quite some time before HMD Phase 2 (the resurrection) is completed and the centre members have the opportunity to realize the value of the work done in phase 1. To this point I am giving those individuals involved (including myself) a pat on the back for hard



work well done. These members were a small group that has been long committed to the growth of the RASC Kingston Centre and it is only money, not dreams or dedication, that has kept our observatory land and buildings project from coming true. I know that there were others who would have been there if they could but I must say also that most of us are from a die-hard core group that has been around for 20 years at the least. I am not intending to bully anyone into involvement but this core group is getting older and wearing easier, there were times over the weekend that we jested about sitting in Director chairs in our old age watching the next generation rebuilding the HMD and putting it to use stating, "Uh yes, if memory serves me right that piece goes there and the other there..."

RASC Kingston Centre in my personal opinion needs some new blood to step up and lend a hand if not take the lead. Our current administration is not lacking but for projects and with events like HMD our energy is diminishing. I joined Kingston Centre 20 years ago during a time when the Internet did not exist and the public had to peer through our scopes to see the amazing views of the day and night sky around us. My participation has waned in recent years as other commitments, as well as a level of burn-out, has come about. We seldom hold these public



The Sunday group with the 16-foot dome in storage for the winter. L to R: Paul Winkler, Brian Hunter, Hank Bartlett, Kevin Kell, Kim Hay, Ken Clarke, Susan Gagnon, Tessa Clarke.

events anymore and I have at times blamed the Internet for robbing us of the opportunity to overwhelm the public with our observations. However to be honest, in my opinion it is also because of burn-out and aging that we do not provide these observing sessions today. Not everyone is suited or interested, not everyone has the time but if at all you feel at all that you would like to contribute to revitalizing and carrying on the reputation of RASC-Kingston remember that NOVEMBER is election time and you should have yourself nominated or offer yourself up for office. Even just step up and provide support at KAON or any public event held: participation and enthusiasm can be contagious. No one expects expertise in planetary science or physics (however the public does at times ask weird and perplexing questions); all you have to have is a love for the open space around us and be willing to share the

aperture of your scope.

(Yes, for those that know me well I have had some red wine and I am sipping a well-earned Black Russian).

Goodnight and thank-you to my compatriots for one of the best weekends I have had in a VERY long time.

**Paul:** Some deep thoughts here, Hank. I too enjoyed the weekend very much. Like other events in days past. Unfortunately, I am paying for it now! I can hardly walk without limping; when I get up out of a chair my whole body screams its discomfort.

So, I think when the reverse operation takes place, I shall recline in a comfy chair and express my opinions about which pieces might go where. I'm sure no one will blame me if my memory turns out to be faulty!

**Kevin K:** If it makes you feel any better... so are the rest of us. Very slow to move. Stop and sit for awhile and it is very difficult to get moving again.

I haven't had a chance to try out the medicine: double black Russians... 'cause there is other stuff that needs to get done around home that requires some balance and thought cohesion!

The spare parts have been stored in the storage shed, and photos taken for inventory purposes. ★

...continued from page 2

The Kingston Centre donated a Galileo scope from 2009 to the production crew to use as a team building effort by the cast and it was well received.

### ORBIT THE PLAY

I unexpectedly found time to attend the last performance on the evening of November 1st. It was in the Studio

Theatre at the Isabel Bader Centre for the Performing Arts and it was sold out. They had managed to assemble the telescope and it was on display outside the theatre. I took a friend and we both enjoyed it a great deal.

The set was limited to the Convent. I suspect it was a true representation of the lives lost in such institutions of the day. In the case of one daughter it was a story of

## ...Orbit Under the Stars

unquestioning loyalty and devotion to father and church. In the case of the second daughter it was a story of a woman just as keen on science and politics as any man on the outside. There were light moments and beautiful singing. It delivered the message, sometimes graphically, how women lost their youth, beauty and ultimately their lives in such places. ★