

With new software, Kevin Kell got his old Canon A540 camera to do much longer exposures, such as this 256s shot at FNS.

<http://starlightcasade.ca/blog/2012/09/newer-chalk-firmware-does-1024-seconds/>

Upcoming Meetings

Saturday, October 13 7:30p.m.
KAON, at Ellis Hall Observatory
Grand unveiling of new telescope!

Monday, October 15, 7p.m.
Dr. Jean-Marc A. Noël, of the Department of Physics, RMC, will tell you everything you've ever wanted to know about **aurora**. Dr. Noel has been asked to touch on the disconnect between predictions and observations.

Monday, November 19 7p.m.
NATURE VS NURTURE: THE ROLE OF THE CLUSTER ENVIRONMENT IN GALAXY EVOLUTION
followed by the KC
ANNUAL MEETING & ELECTIONS
Queen's graduate student **Nathalie Ouellette** will speak on her research using space-based infrared telescopes to investigate this topic as well as a recent NASA press release including her specific contribution using the Spitzer telescope.

Meetings are held at **Queen's University, Ellis Hall, Room 324. ★**

In this issue:

- ▶ Reports & Other Items 1
- ▶ Fall'n'Stars 2012 2
- ▶ KAON Report: Sept. 8 3
- ▶ Observing Reports. 4
- ▶ Sky Brightnesses 5
- ▶ Donations / Sep.17 Meeting . . . 6
- ▶ RASC Docs / Blue Moons. . . . 6

Annual General Meeting & Elections: Nov 19

AGM business will take place after our guest speaker.

Date: Monday November 19th, 2012
Time: 7:00-9:30pm
Location: Ellis Hall Room 324,
58 University Avenue, Queen's
University, Kingston Ontario

Agenda:
Welcome
Presentation of Agenda
Approval of Agenda
Approval of minutes of the 2011 AGM
Reading of annual reports:

- ▶ President
- ▶ Vice President
- ▶ Secretary (report, approval to update at year end)
- ▶ Treasurer & Auditor reports
- ▶ Librarian
- ▶ National Council Representative
- ▶ Editor
- Centre Elections:
- ▶ Secretary
- ▶ Librarian
- ▶ Editor
- ▶ National Council Representative
- ▶ Auditor
- Adjourn with thanks. ★

Reports & Other Items

THE VARIABLE THAT WASN'T

A recent discovery report of a new cataclysmic variable star in Taurus by the Russian *Mobile Astronomical System of TElescope-Robots* (MASTER) has been retracted after the new variable turned out to be Jupiter's moon Himalia. D'oh! AAVSOer **Mike Simonsen** commented: *I'm quite disappointed to realize not everything posted to the Internet is true...*

MEETING GIVEAWAYS

As a further incentive to attend KAON public observing sessions and regular centre meetings, we will be having a table of giveaway goodies for all. These include, but are not limited to: red material for flashlight covers, light pollution abatement cards (1 of 9 cards each event), RASC Starfinders, IYA cards, and *Mary Lou's First Telescope*. If you have extra astro goodies and

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

would like to share them with others, please bring them along.

OTHER ITEMS

A **Jupiter impact** was observed by two independent observers on September 10th...KC members were clouded out for the recent **Venus-Regulus conjunction. ★**



FALL'N'STARS IS A STAR PARTY held annually and jointly with the RASC Belleville Centre. We switch leads each year to share the work and responsibility. 2012 was our 13th annual, counting the inaugural Dark Sky Night Observing Session (DSNOS) at Presquile Park in 2000.

The event is basically the rental of an area (the Camp Sagonaska Boy Scout Camp in the Vanderwater Conservation Area near Thomasburg Ontario) each year in September, generally around the new moon weekend. Attendees can choose from weekend registration or a

Saturday day pass. Typical events include an opening rocket launch on Friday, swap meet on Saturday along with a series of presentations in the afternoon, a group photo, and a catered dinner.

Observing opportunities are daytime Friday from noon onwards, Saturday all day, and Sunday morning; there is stellar observing on Friday and Saturday nights.

A main feature is the low cost of the event with low camp rental rates and low dinner rates. The financial goal of the event is to not lose money, as we are not out to make a lot of money. Profits or losses are shared equally between Kingston and Belleville.

Most people camp in tents or small trailers in the field with their equipment, but there are also a limited number of bunks in the longhouse. The washroom facilities are primitive but we do our best to make your time spent there as inoffensive as possible

Typical attendance is between 20 and 30 people. The longhouse capacity for dinner is approximately 36 comfortably with maybe 50 as a hard upper limit. The field can easily accommodate 75-100 campers if not



Rose Marie Burke

continues on page 3...

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.macdonald2 (at)
gmail (dot) com

or:

Walter MacDonald
PO Box 142
Winchester ON K0C 2K0

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. © 2012, all rights reserved. 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
PO Box 1793
Kingston ON K7L 5J6

E-mail:
kingston@rasc.ca

Website:
kingston.rasc.ca

RASC-KC Board of Directors

President: Susan Gagnon
Vice President: Kim Hay
Secretary: Steve Hart
Treasurer: Kevin Kell
Librarian: David Maguire
Editor: Walter MacDonald
National Council Rep: Brian Hunter

Committee Chairs/Coordinators

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

THIS WAS THE FIRST Kingston Astronomy Outreach Network (KAON) of the new season. It is the last running of the summer hours (9–10:30 p.m.); the October 13th open house will start at 7:30 p.m



Nathalie Ouellette, Queen's Observatory Coordinator, introduced **Dr. Gregg Wade** of the Royal Military College, who gave a talk on the *Mars Science Laboratory* and the *Curiosity* rover to a full room of 75 people. This 32-minute talk gave a good review of images and video from the landing event a month ago.

After the talk, the observing deck was unexpectedly opened (we had been expecting cloud and rain and thunderstorms). **Terry Bridges** operated the Queen's Meade LX-200

manually (no electronics), and **Kim Hay**, **Brian Hunter**, **Susan Gagnon**, **Rose-Marie Burke**, and myself were working the crowd. Despite the presence of cloud, haze, and light pollution, we did manage to look at a few targets of opportunity:

- ▶ Andromeda Galaxy
- ▶ Alberio (double star)
- ▶ Mizar (double star)
- ▶ Lagoon Nebula

We packed it in after 10:30 p.m.

The Fitzgerald telescope saw good use. It is a 20cm Dobsonian, made by Kingston Centre members,



that is dedicated to the KAON sessions. It is dead simple to set up and use and anyone who would like to operate it during a session just has to show up and do it! The only operational drawback to the scope is that it moves in altitude far too easily. We've roughed up the bearings and positioned the Teflon contact points farther apart, but it still gets moved by every person coming up to it and leaning on it. We have added a new neutral density moon filter to the Fitzgerald telescope accessory list, to complement the green one that was already with the scope. ★

...Fall'n'Stars 2012, September 14-16

continued from page 2...

more.

Tree growth and increasing levels of light pollution are turning the event more and more into a social gathering more so than a dark sky observing session. The opportunity to see and share with others, their equipment, techniques and knowledge are the big draw for many.

A few years back Kingston did not have the volunteers needed to lead during our rotation, and Belleville stepped up to cover the gap. Thanks! We are proud that the event has continued for this long and hope that it continues on into the future. Thanks to all of the volunteers over the years!

Hank: Very well said Kevin. It is true that this is a very social, meet with friends, encourage new observers, and share info & experience event. FnS is an event where no novice should feel awkward or out of place but should take benefit of the years of various experience and talent available. From the basic observer to the deep sky wizard, from the casual observer to the avid astro tech and the point-and-shoot to experienced astrophotographers there is full spectrum representation. If you are new to Astronomy this is the star party to come to in 2013. See and try the variety of telescopes from 2.5" right up to 24"; everyone will explain

and/or let you observe through their equipment.

Mark Coady: It's sad that more actual Kingston and Belleville Centre members don't take it in as it is so close for them. Jennifer and Angela, who I affectionately refer to as the "Chatty Cathies"—Deb Crossen's term—had so much fun they're going to try to bring more people next year. ★

Here at my earthly station set,
The revolutions of the year
Bear me bound and only let
This astronomic world appear.
—Edwin Muir,
"The Stationary Journey"

MONDAY, SEPTEMBER 3

Kevin Kell reports that *RadioJove* has been active since Sunday at around 4 p.m. and the SID detector at SCO also went off about the same time.

SUN/MON, SEPTEMBER 8/9

Kevin: I was outside taking some images with our old Canon Powershot A540 camera on a tripod, testing out its new CHDK software, and saw a wonderfully slow, bright, yellow/orange meteor go across the sky NNW from near Vega to near the Big Dipper. The time was 03:32:32 UT on September 9 (or 21:32:32 EDT September 8). It was a slow-moving yellow-orange meteor, which changed brightness a few times in the 2-3 second pass, and it had a nice breakup into many pieces at the end. This was extra-special neat because in addition to seeing it visually, it was also caught on the AllSky2 camera. AllSky1 (the 90 second exposure system) did not catch it—must have happened during the 10-second image download time when the system is not actively exposing.



Rose-Marie: Rats, I missed it!! I was playing with the new barndoor tracker, pointed south, wanted to get Scorpius and Sagittarius. There was one that went from Perseus to Aquarius, but it wasn't bright enough or just out of focal range, didn't show up in the pic.

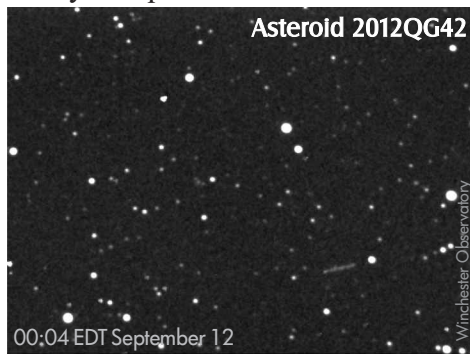
MON/TUE, SEPTEMBER 10/11

Walter: Tonight started out quite nice, but later on the transparency was slightly muted as heavy dew appeared everywhere. It was quite chilly (+6C), but no frost. I imaged 199 variables and observed a bit visually with the C8 (T CrB, W Her, M13, M92, NGC 6229, M57).

I went outside again about half an hour before twilight and there was Milky Way to the right of Orion—make that a big wisp of cloud! Jupiter looks great in the midst of Taurus and the crescent Moon and Venus filled up the eastern sky. I got my flat frames just before sunrise and then I went out and closed the dome just after 06:30. There was a lot of wispy cloud about, but the Moon was nice and high and I could even see Venus through some cirrus in the east. At least the overhead stayed clear for my flats.

TUE/WED, SEPTEMBER 11/12

Walter: The transparency was only average and it was much warmer (no dew!) with a gentle breeze. 116 variables were imaged and I was also able to grab a few frames of the 300m-diameter asteroid 2012 QG42—it is trucking along quite nicely in Equuleus.



At the bottom right of the Great Square of Pegasus is the globular cluster Palomar 13 (just 3/4° from the classic barred spiral NGC 7479). This was tough to get to register in a stacked image—very faint! Some of

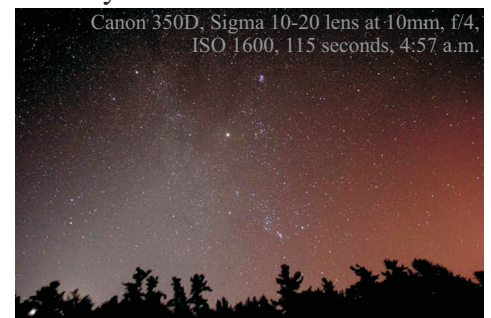
these Pal globs are very challenging to see visually, usually only with large aperture scopes (the Venor would be up to the task!).

I also imaged a big (5.2' diameter!), faint planetary nebula, Jones 1, that sits atop the Great Square; this would be a challenge object visually since the description says it was very faint and only seen in a 13" with a UHC filter.



Kevin: We just popped out this morning around 5 a.m. to image the lunar conjunction with Venus and Orion is looking magnificent over Kingston from our vantage.

Ian: When Sheila and I left for work this morning at 7:10, I pointed out the crescent Moon and Venus conjunction. Both were still quite visible and easy targets—and the sky was perfectly clear here...a welcome relief after so many cloudy days recently.



Hank: OK, easy to find right now (9 a.m.) just 4° from the Moon.

FRI/SAT, SEPTEMBER 21/22

Kevin: There was a fireball reported over SE Canada and NE USA. We were on the road in Brockville at the

time and missed it personally. We think the all-sky camera got a piece of it (look for the bright spot low in the northeast of the image). Our timestamp was the 90 seconds ending 20:29:46 EDT on Friday evening.

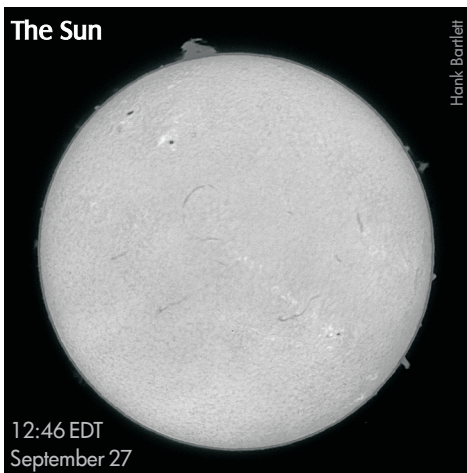


SUN/MON, SEPTEMBER 23/24

Kevin: Months of nothing and boom—two big ones within days of each other. The first (above) was low in the NE with an estimated mag of -11. The second was last night 01:41:27 UT (Sept 23 21:41:27 EDT), an 8-second long fireball approaching mag -3(?). It started high and east heading north, continuing out of the frame, got brightest in mid-flight, then flickered in brightness. It covered at least 50% of the sky in its travel. Pictures and video are on starlightcascade.ca.

THURSDAY, SEPTEMBER 27

Hank: Things are looking up on the Sun. Today I took my first images



since FnS2012. There is a lot of activity there, the limb **prominences** are over-exposed here, but note the filaments on the surface and the active regions.

Walter: CSC said it was supposed to be clear starting at 8 p.m. last night. I kept checking but it did not clear until 04:30 and by then I was too tired.

Tonight is clear but I have to keep the dome closed because the building next store burned down at supper-time—and the fire department will likely be here all night dousing hot spots.

THU/FRI, OCTOBER 4/5

Kevin: Allsky2 caught a **fireball's** 12-second flight across more than half of the sky as it moved overhead from west to east at 05:26:28 UT Friday morning. Our Allsky1 camera system did not pick up this event at all. As you can see from the image in and around the time period, half the sky was washed out by the moon in its 90-second exposure.



Even if Allsky1 did capture the event, we would have had to check for the possibility that it was a local aircraft or International Space Station pass, because we would not have known the event duration. Allsky2 tells us the event lasted 12 seconds. Local aircraft and even the ISS take more than 12 seconds—much more!—to cross from overhead to the far east (almost half the sky). ★



RECENT DISCUSSION ON DARK SKIES AND OBSERVING SITES

Lennox and Addington Dark Sky Viewing Area: darkskyviewing.com

Mark Coady: I camped in Ferris Park in Campbellford in July and took Sky Quality Meter readings of 20.90, which are not that spectacular. Elbow Lake, north of Kingston, rated 21.12. There are areas nearer to Peterborough that fare better. What Ferris does have are campsites that are open more to the sky allowing for campsite astronomy rather than camping at one spot and still having to lug your scopes to an observing field.

Kevin Kell provided some data:

Cypress Hills Park, Saskatchewan:
SQM=21.46 (August 2006)

Sleaford Observatory Saskatoon Centre
SQM=21.45 (August 2006)

Elbow Lake (by Mark Coady)
SQM=21.21 (August 2012)

Fall'N'Stars, Thomasburg ON
SQM=21.13 (Sept. 2005)

Starlight Cascade Observatory, Yarker ON
SQM=21.11 (Sept. 2006)

Glenlea Observatory, Winnipeg Centre
SQM=20.58 (August 2006)

NYAA Oak Heights, Colborne ON
SQM=20.23 (July 2005)

Doug Angle: One night I observed at Nirvana (SQM=21.6) and took readings every 10 km on the way home. From Kaladar, I went highway 7, so I didn't actually go past the Sheffield observing site, but it's 5-10 km south of Kaladar, so near enough. Based on this, I'd say the Sheffield site is the darkest until you get nearly to Nirvana, another 40 minutes or so north. ★

Thinking About Donating \$\$ to KC?

Kevin Kell, Treasurer

I WAS RECENTLY ATTEMPTING to renew my RASC membership online and ran into some difficulties that prompted me to write this article.

The online system of joining and renewal is a **good** thing. It makes us, the customers, have a more efficient, enjoyable and painless experience that will hopefully be a positive when it comes time to renewing and perchance even making a donation! Keep the customer happy! Make it ever easier to complete a transaction!

We, as a Centre, cannot accept credit cards directly. We are too small an operation to do this and it would involve a larger financial hit for account transaction charges. Luckily (!) we have a larger, related organization, the RASC, that does accept credit cards. Over time they

started charging us a 1.3% transaction fee, which seems to be reasonable at first glance.

So for starters, when you renew or make a donation, some of it is taken off the top. Lately this amount was increased from 1.3% to 1.7%. Rumour has it that it will be increasing again. Be that as it may, the issue that did come up was that the online renewal system would not accept donations of more than \$100.

Queries led to responses that this arbitrary limit may be changed upward, but that it would take some weeks and would lead to another increase (up to 4%) in the transaction fees.

OK, so that is the back story. The point of this article is to ask you, if you are at all considering donating to

the Centre, to consider instead to send a cheque directly to us at:

RASC Kingston Centre
Box 1793
Kingston ON K7L 5J8
Canada

instead of using a credit card via the RASC.

Once received, I will deposit them within 2-3 weeks, mostly depending on when they actually arrive in my hands. Canada Revenue Agency eligible tax receipts are issued at the end of each calendar year. I attempt to get them out in the first two weeks of January.

Please do not let this dissuade you from donating at all via credit card vs. cheque. It will just allow more of your intended donation to arrive at its intended destination. ★

Sept.17 KC Meeting

Susan Gagnon

IT WAS GREAT TO SEE so many that we had not seen for months and talk Astronomy. Thirteen were in attendance to hear of summer exploits. We had many reports:

- ▶ **Hank** on FNS and summer solar observing,
- ▶ **Susan** on the Elbow Lake expedition,
- ▶ **Rose-Marie** on FNS and summer 2012 observing,
- ▶ **Kevin K** on Malcolm Park's time lapse observing film and off-the-shelf astrophotography,
- ▶ **Doug** on Sky Quality Meter measurements from Nirvana south, suggestions for Venor maintenance and using the *Observer's Handbook* for estimating limiting magnitude,
- ▶ **Kim** on promotion of the ETU observing list.

We then had a round of observing reports. There were a great deal of comments and questions as we went around the room. 2012 Fall 'N' Stars was discussed and there were many with plans to attend. The meeting adjourned at about 9p.m. ★

New RASC Docs

James Edgar, National Secretary

Dear RASC Members,

At National Council meeting NC122, the Executive Committee promised to make available to members the proposed new documents regarding the Canadian Not-for-profit Corporations Act.

To that end, the Governance Discussion Paper, a proposed new By-Law #1, the proposed Articles of Continuance, a PowerPoint presentation made to NC112 and the 2012 Annual General Meeting, the RASC Manual, including a new proposed Policy Manual, and a proposed Board Policy Manual are made available for members on the Web site at:

rasc.ca/documents-regarding-new-bylaw-1

Please review and advise the undersigned of any comments or suggestions. (If you haven't yet logged in to the site and are unsure of the procedure, or if you are having difficulty with your login, go to the Login Assistance page at:

rasc.ca/login-assistance). ★

On Blue Moons

Lar3ry <at> sasktel.net

The meaning of "blue moon" has changed in recent times to mean the second full moon in a calendar month. Larry put his thoughts about this on the RASCals list:

I think what bothers me about it is that it isn't, in my opinion, rare enough for what I mean when I use the term "once in a blue moon." I would consider that phrase to mean "a few times in my lifetime" or perhaps 10 times in my lifetime. I certainly don't consider it to mean "every three years and occasionally sooner."

Here are the next 11 so-called blue moons. Note the times it happens twice in the same year:

2015 Jul
2018 Jan & 2018 Mar
2020 Oct
2023 Aug
2026 May
2028 Dec
2031 Sep
2034 Jul
2037 Jan & 2037 Mar ★