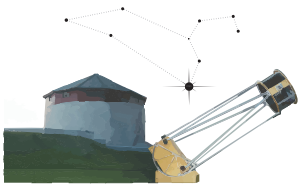
September 2013

Regulus

RASC Kingston Centre



In this rare image taken on July 19, 2013, Cassini's wide angle camera has captured Saturn's rings and our planet Earth and its Moon in the same frame. NASA/JPL-Caltech/Space Science Institute (PIA 17171)
Inset: Earth & Moon in Cassini's high resolution camera. (PIA 14949)

President's Message

Susan Gagnon

Hello all! I hope everyone had a great summer and enjoyed a bit of observing. There are a couple of changes this fall.

Meeting Nights

In our quest for the best suited night for meetings your executive has booked the meetings for the second Thursday of the month in room B201 in Mac-Corry Hall. (While we all seemed to like the Ellis Hall room, it was unavailable this year.)

The November 14th meeting will feature elections to the Board of the Kingston Centre. The positions up for grabs are President, VP, Treasurer and council rep.

The December 12th meeting will be preceded by our annual Banquet at a local restaurant.

2014 meeting dates confirmed thus far are: January 9th, February 13th, and March 13th.

Meeting times (nominally) are 7 p.m. to 9:30 p.m.

With the meetings on Thursday nights and fewer days to get to work tired, we hope to renew the after meeting socializing. The easiest parking is the surface lot beside the

continues on page 15...

Upcoming Meetings

Friday-Sunday, September 6- 8
Fall'n'Stars 2013 Star Party
Vanderwater Conservation Area

Thursday, September 12 7 p.m.
Summer Observing Reports
& Telescope Projects
(*Note new room—info below.*)

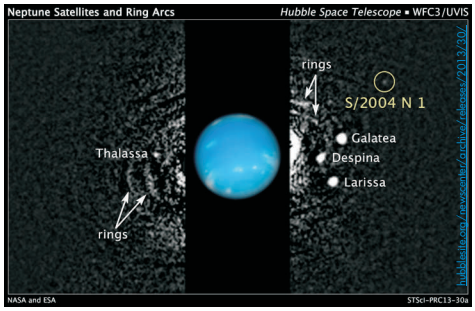
Saturday, September 14 8 p.m.
KAON Observing Session
Jonathan Sick (Queen's University)
A Journey Through the Andromeda Galaxy

Thursday, October 10 7 p.m.
Regular Meeting

Meetings are held in Room B201 at Mackintosh Corry Hall on University Avenue at Queen's University in Kingston, Ontario. **KAON** (Kingston Astronomy Outreach Network) sessions are held at Queen's Observatory on the 4th floor of Ellis Hall.★

In this issue:

- President's Message 1
- Reports & Other Items 1
- Donations to the Centre. 2
- NF Dark Sky Preserve. 3
- Observing Reports: July-Aug . . 4
- Tardis Observatory Project . . . 14
- Odds & Ends, KAON Report . 14
- Of Libraries and Discards 15
- On Our Royal Appellation. . . . 16
- New on rasc.ca. 16



Mark Showalter of the SETI Institute used Hubble Space Telescope images to find a 14th moon of Neptune, designated S/2004 N 1.

Reports and Other Items

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

Temporary Website Outages

On July 16th the RASC website was down for a few hours. According to **Dave Lane** there was a gas leak in Halifax, and half the city's power was shut down. On August 26th, a power outage took the server down for 75 minutes. Since then, the server has been configured to restart automatically when power is restored.

Visual Comet Discovery!

Congratulations to Ukrainian amateur astronomer Gennady Borisov discovered a comet, now C/2013 N4 (Borisov), on July 8 near Capella while attending the Southern Night star party in Crimea. Working the twilight sky seems to offer the faint hope of stealing the odd discovery from the robots!★

Donations to Kingston Centre

Kevin Kell

THINKING ABOUT MAKING A DONATION? This is just a short article/reminder for those thinking about making a donation to the RASC Kingston Centre.

We recommend sending donations by cheque directly to the centre at our address of record in *Regulus* and on our website. While we appreciate donations that you may do while renewing through the National website with a credit card, please be aware that there are processing fees (currently at 1.7%) over which we have no control, which are subtracted away from any amount making it to the Centre.

We are a Canada Revenue Agency federally registered charitable organization (#827905720RR 0001) and do issue tax donation receipts for donations over $20. These normally come out in mid-late January as they cover the previous calendar year.

You can see our tax records at www.cra-arc.gc.ca/charities/ under "charities listings" and search for "astronomical kingston" and you will find us. There you will see that we typically spend far more on charitable activities than we take in, in actual donations. For example, in 2012, we issued donation receipts for $410 and spent $1087 in charitable program expenses. These include: public lectures in astronomy (room and speaker costs), sponsorship of the local Science Fair, cooperative efforts with the Queen's University Observatory open house (KAON) with handouts and educational material, astronomy outreach sessions, and much, much more.

Our single largest fundraising objective outside of operational education programs, is our goal of an observatory site. Donations go into this fund by default, unless the donor specifies otherwise.

This fiscal year (October-September) has been an excellent year to date with over $1200 in donations.

Thank you to all who donate. It helps us survive and continue with our education and public outreach efforts!★

> Ignorance is a lot easier and a lot more convincing than knowledge. Knowledge takes time, it takes thinking, and it takes figuring. Ignorance doesn't take any of those things. It just takes belief.
>
> —Tim Blackmore

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.

RASC-KC Board of Directors

President:	Susan Gagnon
Vice President:	Kim Hay
Secretary:	Kim Hay
Treasurer:	Kevin Kell
Librarian:	David Maguire
Editor:	Walter MacDonald
National Council Rep:	*vacant*

Committee Chairs/Coordinators

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

RASC Kingston Centre
c/o 151 Nicholson Crescent
Amherstview ON K7N 1W9

E-mail:
kingston@rasc.ca

Website:
kingston.rasc.ca

The North Frontenac Dark Sky Preserve

Kim Hay & Kevin Kell

The North Frontenac Dark Sky Preserve is an economic development project of the township of North Frontenac and had its grand opening on Saturday, August 3rd, 2013.

The site is 20 minutes east of highway 41 on Road 506, about a 90 minute drive from Yarker and maybe an hour north of Napanee.

The site itself is just off Road 506 and has an ambulance helipad nearby in the south. Plans are to increase tree plantings along the road and against the municipally owned property line on the east to block light from the nearby home. It has 110 Vac power and will have a north in-dicator on the pad itself. There are also picnic tables and benches, a welcome addition!

The southern view is excellent, in the highlands looking downhill. We witnessed a large thunderstorm move through the Napanee/Kingston area over a few hours from our vantage point. Arcturus popped out of the dimming sky in the west just before 9 p.m. and Saturn and Spica a short time later. Even before sunset however, the mosquito menace arrived with a vengeance.

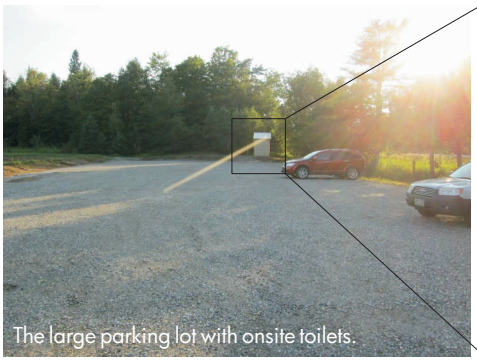
In the end it had been a long day and we packed it in about 21:15 for the 90 minute drive home in the dark on strange roads we had never traveled before. It took a good 20-30 minutes going east to find Highway 7 and Sharbot Lake; another hour to home. We do plan on stopping in again, at night, but perhaps combined with a camping trip to Bon Echo Provincial Park, 30 minutes NW.

All in all it was a worthwhile trip—at least once. There were about 60 people there for the grand opening and we are hearing through other channels that the site is getting good use, especially from Ottawa folk.

Kim Hay, **Brian Hunter** and myself were there from Kingston. Local astronomer **Guy Nason** and someone else brought large scopes for public viewing. I still have difficulties in the 45 minute drive to the Lennox and Addington Dark Sky Viewing Area, and this site is a good 90 minutes away. Go at least once, even if only in the daytime to do solar or lunar observing! ★

The North Frontenac Dark Sky Preserve sign as seen from Road 506 looking south onto the site.


One of the early arrivals was Guy Nason, a local cottager who was instrumental in getting this project along. Here he is with a local, doing some solar observing.


The large parking lot with onsite toilets.


On the inside it was too dark to see—we will recommend solar powered inside LED lighting…


Cake is always nice too! There was more than enough for everyone in attendance.


The observing pad from the parking lot Large enough for 20+ vehicles no problem.

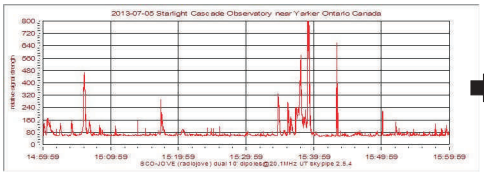

The observing pad as seen from the NE side of the site looking SW.

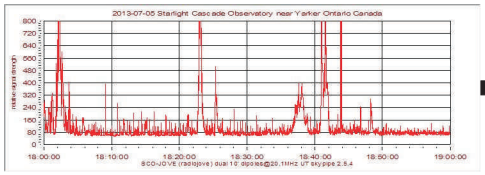

This may be Gary Caldwell (RASC Hamilton) who has a local cottage.

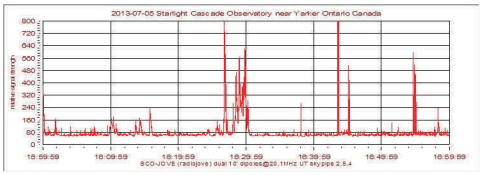
THU/FRI, JULY 4/5

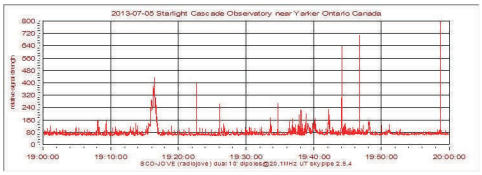
Kevin K: The great outdoors, dodging rain, straining to see aurora but only rainbows. What's that hornet doing? Arrrgg! Another hornet's nest inside the Allsky1 camera housing. I opened it, played ground to air attack with a hornet swatter, grabbed the nest and ran out to the road and carefully placed it and immediately along came a large vehicle to take care of that issue!

Today on the solar radio list, people were posting big radio events! Another! Another! A double! Sunspot group AR1785(?) is going nuts. Here are four hours of solar radio burst images recorded today:





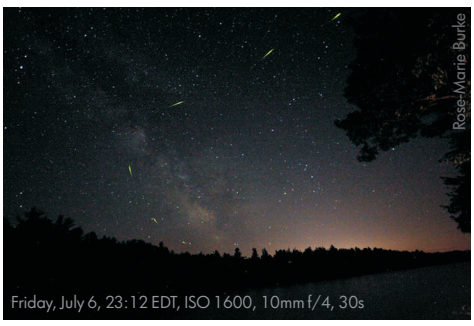




Rose-Marie: I did finally manage to try out the photo box last night, although being tired and hot and mosquito bitten wasn't helping with the setup. I was sure I had the camera set to f/3.5, but when I took the camera out and checked the pics it was on f/5.6. At least the first run wasn't too bad. The tricky part is getting the camera pointed in the right direction, had it towards Scorpius, but wanted just a tad of treeline, got it too high. Got one shot with a busy little firefly.

FRI/SAT, JULY 5/6

Rose-Marie: I set up the camera in the "window box," put it out on my little dock and let it run, got a nice series of shots of Scorpius, Sagittarius, and the Milky Way marching across the horizon. No sparklies. Lovely dark night, why are we so tired on good nights? Set the alarm for 1 a.m., hit the snooze button a couple times before I remembered that there were supposed to be auroras, then groggily dragged myself upright and checked the forecast. Seeing all that red got me going. The line was *just* above Kingston. I retrieved the camera and headed for the big dock, didn't see anything. After a while there was some barely perceptive lighter glow in the gap to the north, but it never grew beyond that. I sat there and kept hoping it would fire up an outburst, but nada. Clouds were sneaking up from the south, and finally covered the sky at 2:20 a.m. Argh. Did anything show up on the Allsky camera around midnight? I am not liking the weather forecast: clouds, clouds, clouds.

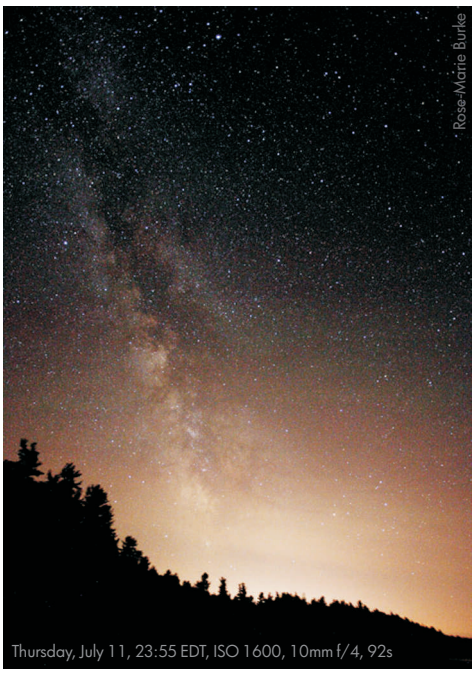


THU/FRI, JULY 11/12

Rose-Marie: Finally got a clear night last night, but was too tired from chores to really get out and do observing. I did manage to play with the barndoor tracker for a couple shots, then took the camera up to the patio where the air is drier and put it on auto for a series run. No meteors in the series.

FRI/SAT, JULY 12/13

*According to **Mark Kaye**, a large fireball was reported at about 00:15 EDT that was visible over most of the Lake Ontario region. **Kevin Kell** reports that nothing was detected on either of the StarlightCascade Allsky1 or Allsky2 cameras.*

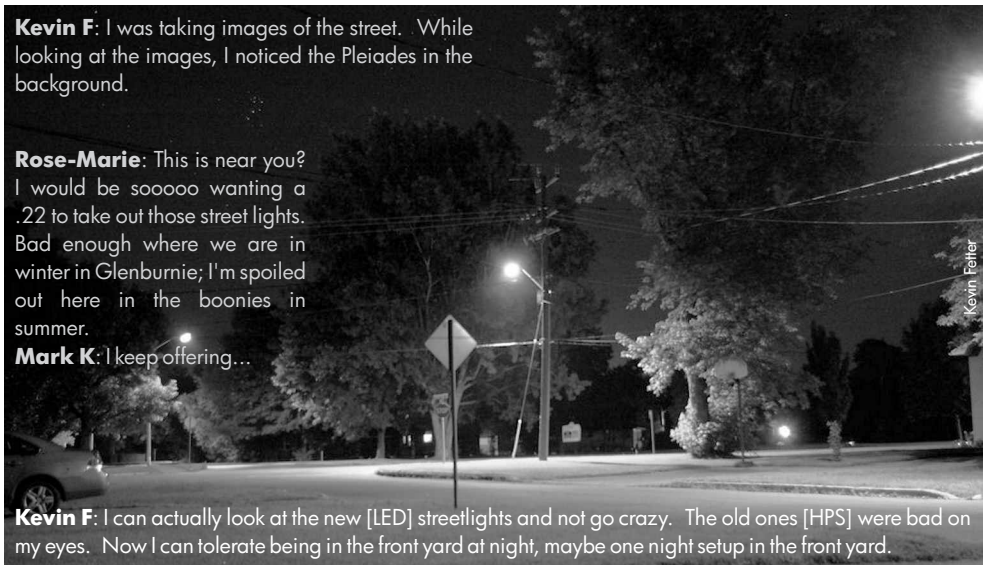


Sat/Sun, July 13/14

Rose-Marie: Okay, I think I caught it last night. There's a little streak in the upper left corner of one of the photos [*below, a cropped and enlarged version of the raw image*]. 'Twas surprisingly clear last night; I figured with the heat there would be more haze, but until about 00:30 when the air got cooler and the dampness started to settle in and fog the lens conditions were quite good. Like Kevin [Kell] says, though, mosquito hell. Good thing I carry that little bottle of OFF. I took some pictures with the barndoor tracker, then settled into a chair with the 15x70 binocs, and cursed myself for having forgotten my *Observe the Universe* sheets. But...had fun scanning through Sagittarius and Scorpius and area, looking at nebulae and star clusters. It doesn't hurt to familiarize oneself with targets.

While looking through binocs I set the camera on for 30 second exposures, then felt the dampness settling, sure enough the lens was fogging up. I was too tired by the time I got back to the cabin to drag out the window box and set it up.

Kevin F: You did capture the flaring geo sat. The darn clouds came just in time to prevent me from seeing the flare show.



Kevin F: I was taking images of the street. While looking at the images, I noticed the Pleiades in the background.

Rose-Marie: This is near you? I would be sooooo wanting a .22 to take out those street lights. Bad enough where we are in winter in Glenburnie; I'm spoiled out here in the boonies in summer.

Mark K: I keep offering...

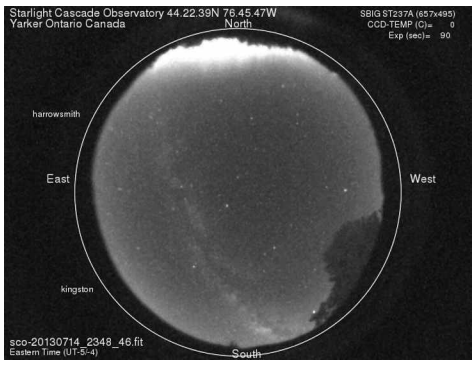
Kevin F: I can actually look at the new [LED] streetlights and not go crazy. The old ones [HPS] were bad on my eyes. Now I can tolerate being in the front yard at night, maybe one night setup in the front yard.

Sun/Mon, July 14/15

Rose-Marie: Suckered again. Kept watching spaceweather, predictions looked promising. Set the alarm for midnight, nada. Reset for 1:00 a.m. and there was a whole lotta red on that oval, thought here it comes. Got dressed, hauled my bleary-eyed self down to the dock to set up, listened to some raccoons snarling and fighting. Nice clear night, again surprising that it wasn't really hazy. Took a couple test shots to the north, nada. Turned the camera to the south, figured if I was sitting there waiting let the camera do a run on Sagittarius marching across the southern horizon. Of course by second click a lovely bright meteor slowly made its way from near Cygnus down through Ursa Major. A minute earlier I'd have caught it. Sat there swatting mosquitoes from around 01:20 until 03:11, went back to my cabin once to turn on the tablet and check, the aurora oval was *just* a hair north of us. I kept watching the gap to the north, looked like it was brightening a couple of times, but I didn't want to interrupt the series run with the camera unless I was sure it was worth pointing it that way. From past experience I know that there's a certain brightening that will tell me if its firing up. Finally started falling asleep in my chair, so packed it up and headed back to bed. Only got one shot that picked up a barely perceptible bit of red, but at least I got a good run of the southern sky. There were a few *ppft* meteors, other than that one bright one, and one satellite that came out of the northwest at 03:00 and flared briefly but very brightly; too bad it wasn't in the camera's field of view.

Kevin K: I really, really, really hate to do this to you... There was aurora last night. It peaked for about 10 minutes. The best/brightest part was at 23:48 EDT. You missed it by 2 minutes (it calmed down by about 23:58).

Rick W: I saw that meteor as well. I had just finished imaging (shots of Vega and T Lyr and of North America/Pelican) and observing visually (though by the time I got rid



of a dinner guest, had the imaging scope set up, running and aimed properly, the 12.5" set up, I only managed to bag one object before I packed it in) and was down on the dock just entering the water for a refreshing swim before bed. It was nice and slow with some flaring, about first magnitude.

THU/FRI, JULY 18/19

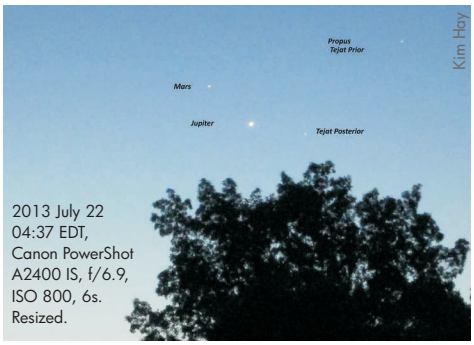
Kim: Nice, lightning storm on one side, and moon on the other side. This was after 10:00 pm last night. No breeze, lots of mosquitoes.

SUN/MON, JULY 21/22

Dusk brought a conjunction of Venus and Regulus low in the NW. At dawn Jupiter and Mars were paired up.

Walter: Nailed it with binocs at 21:27! [*Your Editor then promptly forgot to set his alarm and slept through the show at dawn...*]

Kim: Thanks to Miss Peyton, who got me up at 04:12; she reminded me of the pairing of Jupiter and Mars. So, I took the camera out, and after fighting with the tripod, it appears one of the leg supports is broke. I still managed to take a shot of the planetary pairing, and also of Aldebaran, the Pleiades and, yes, Capella and Auriga are there as well. It was a nice cool morning, and this was a nice way to start the day.



Paul W: Awesome pic, Kim! I did see Jupiter this a.m., but not its companion—like last evening, I saw Venus, but no Regulus in the city! ... By the way, I didn't have my binocs with me or I'm sure I would have seen both Mars this morning and Regulus last night. The city makes astronomy difficult, but not impossible (yet).

THU/FRI, JULY 25/26

Walter: I had a great imaging session. After blasting through Boo, CrB, and into Her I thought I would check the AAVSO site before going to bed. There was a link there (~1hr old) about an outburst of UZ Boo (don't think I've ever seen that one go off) from a guy looking for confirmation. So I spun the dome and scope around, imaged it, did some quick photometry and posted confirmation to the AAVSO site and CVNet. Hopefully some west coast people were able to get some time series of UZ.

I restarted my session and went to bed. I woke up just in the nick of time to get some more flat frames at dawn, so things worked out quite nicely. There was a bunch of cloud in the south, but it did not interfere with my vars or flats. 130 variables were imaged in total, so that will give me some nice photometry to do on a rainy day (which Sunday is supposed to be).

Susan: While I am a great admirer of your efficiency...I find it a bit depressing all the same. I spent an hour in the observatory one night this week, accomplished nothing, but seemed to enjoy myself. Perhaps my simple mind is a blessing after all.

Susan's comments started an exchange featured on page 7...

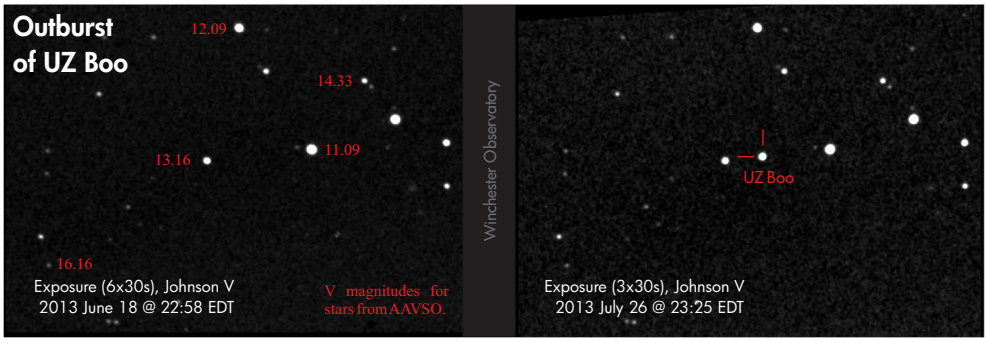
Rose-Marie: Y'all woulda been proud of me last night, got out the 10 inch beastie. I finally finished that cart I had started to build last fall from scavenged barbecue frames, added a couple hardwood struts. Put the telescope on it, and dragged it across the lawn. I am not happy with it, the wheels are too small, makes for a bumpy ride. Back to plan B.

When it finally got true dark I put the PickleJar eyepiece on it and had a good look at Saturn. Swung it around between Ursa Major and Boötes, could not find either Comet Panstarrs or the Whirpool Galaxy. My eyes were gumming up by 23:30 so packed it all up and headed for bed. Forgot about conjunction or I'd have set the alarm.

Walter: In case anyone is interested, the 4 email messages on the UZ Boo outburst are here:

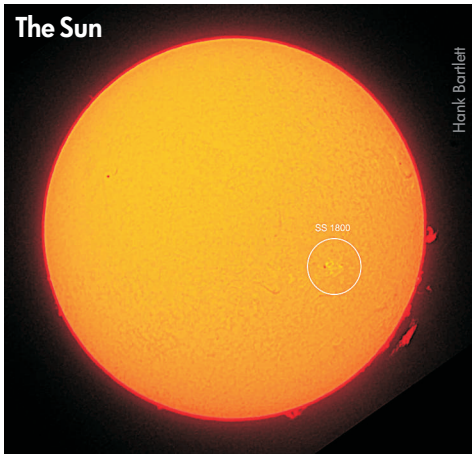
aavso.org/uz-bootis-outburst

The Internet can be such a great tool. I guess in the old days you had



to wait for a telegram or a card in the mail to hear about events like this, perhaps a long-distance telephone call (if there ever was such a thing organized).

Hank: It appears that SS1800 is becoming more active; in this morning's image there was no brighter active region:



FRI/SAT, JULY 26/27

Hank: The large prominence is still floating next to SS1800 but the spot itself seems to be less active than last evening.

Rick: I got out yesterday and tried taking a set of shots (5 each exposed for disk and for prominences) every ½ hour to see if I could see any motion in that large detached prominence. I haven't processed them yet.

I just got back in from 2 hours of observing the Moon (well, OK, that ended about 5 hours ago) and a half hour looking at the Sun. The detached prominence is getting larger, fainter and more tenuous. Quite lovely. Not much filament activity on the disk, a couple associated with or S of SS1800. 1800 has lost all it bright areas as of 1030 this morning. However, 1805 has a small bright spot on one side. I'll keep an eye on it.

I haven't been having much success lately with my images—they seem rather muddy and blurry in spite of my best efforts at focusing.

Walter: A special notice has been issued on the UZ Boo outburst! I'll have to check my records and see if I observed its last outburst, which was 10 years ago. (I observed PR Her for ~8 years before I caught it in outburst. I'm still waiting for BC UMa...)

aavso.org/aavso-special-notice-367

Sounds like the action will be hot tonight! I'm hoping for big superhumps! Guess I'll have to check in to the AAVSO Chat Room and see what's brewing...

Hank: Congrats on the confirmation Walter; with it being mag 12 I think I will pass, but you enjoy it.

NASA's Solar Dynamics Observatory recorded the eruption of two magnetic filaments during the late hours of July 26th.

Hank: Dang, I missed this! Had I been retired I would have been home observing, I imaged that prominence for the past two days and last night after supper it was gone and now I know where it went. I could see this was going to happen as its connecting ends thinned out and disappeared, but "when" was the problem. Oh well, there will be more to come.

Here is an image that I took at lunch time on the 26th about 17:38UT:

EFFICIENCY IN OBSERVING

Susan: While I am a great admirer of your [Walter's] efficiency...I find it a bit depressing all the same. I spent an hour in the observatory one night this week, accomplished nothing, but seemed to enjoy myself. Perhaps my simple mind is a blessing after all.

Walter: What is depressing about it? If I go down the road you're suggesting I'd be all bummed out because the guys with the 20" RC scopes at dark sky sites, or the guys with time on the Hubble Space Telescope, or Steven O'Meara with his super-eyeballs, or whatever, are totally kicking my butt each and every night.

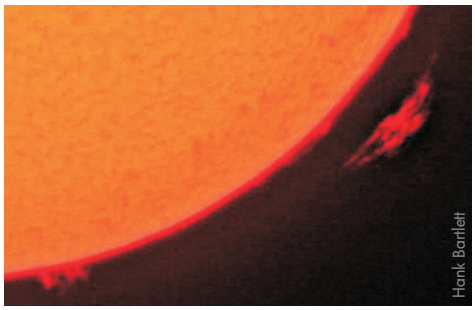
I enjoy visual as much as I do CCD, and even on the rare nights that I don't accomplish much as I'd hoped or planned, I'm still happy as long as I tried. Whether it's one minute, one hour, or one whole night, as long as you're doing (or trying to do) what you love, that's all that matters.

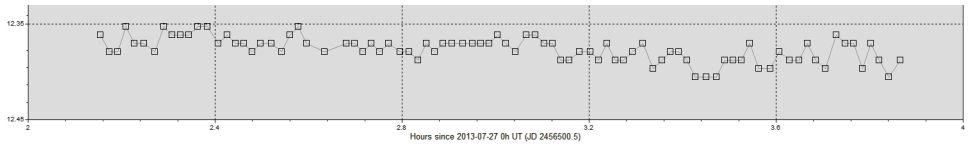
Hank: Well said, Walter! I love my H-alpha but I am not much for ordinary night observing. However give me a special event like a transit, a comet or an eclipse and I am there. The surprise of Comet Holmes was the best since the 2004 Venus transit. Sometimes I look at my images and then those with higher end equipment and talent and think "why do I bother?" Then I post some pic on the wall at the post office and the average Joe about town loves it; it may not be high end quality but it is mine!

Paul: I have been interested in astronomy for 50 years, and still am no further on than your average beginner. I've learned to accept that as OK, because otherwise I'd be mortified with my lack of progress!

Being a city dweller for the most part, and too lazy to travel to dark skies, I content myself with observing by naked eye (or binocs) the major sights of the night sky. That's still plenty of wonders to behold, and I'm pretty happy with that.

Still, I confess that if I had a general sense of dissatisfaction, I'd probably be more motivated to develop my observing skills and spend more time on astronomy. I'm just not super ambitious—I admit it! But the fact that others are much more accomplished means I can vicariously enjoy the entire breadth and depth of the hobby as if I had done it all myself. What more could I hope for?★

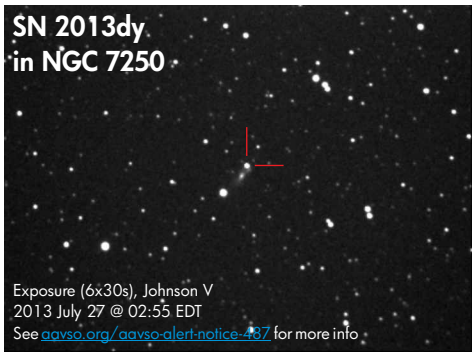




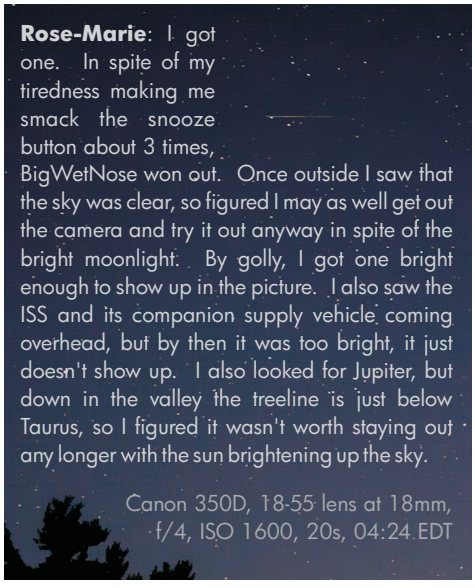
V-filtered time series of UZ Boo (data points at 45s intervals). Things start to look nice and "humpy" in the latter part of this almost-two-hour run, though not quite the 0.1 mag amplitudes that were hoped for.

Walter: I did about 1¾ hours of time series on UZ Boo. After UZ got down to 30° altitude I stopped and had the scope do a bunch of cataclysmic variables (and also NGC 7250, home of SN 2013dy) while I slept.

The usual small group was in the AAVSO chat room, but I just missed CMJA (Mike Cook) who logged on just after I went to bed. He was doing time series on UZ too, from his house-top observatory in Newcastle.



MON/TUE, JULY 29/30



Mark K: I did not wake up until 05:00, when I realized it had cleared. It was cloudy when I went to bed...

I have not been up to The Observatory for nearly two weeks. Last week, a major storm came through Ontario and took out a lot of trees. Our property has not had any damage whatsoever, but a huge pine tree that nearly hung over The Observatory and blocked more than a third of my sky to the east is gone. It is amazing, I now have an eastern sky. I cannot believe the improvement in my view. Now if only I could get rid of the lights from Kingston...

THU/FRI, AUGUST 1/2

Kim: I was awake at 4:15 a.m. (blame it on work), so I got up and went outside to see Jupiter, and what a wonderful view in the east. The waning Moon to the upper right of Jupiter, Auriga, M45, Taurus, yes a few stars of Orion, Castor, and Mars. After coming in and looking at *Starry Night*, I found Mercury was below our tree line. Then at 4:47 a.m. I saw a Perseid, white, fast, mag 0. What a great way to start the day!

Rose-Marie: Must have been something in the air, I was awake at 3:45, kept tossing and turning, decided to wander outside to see what was up. Wandered around in a bit of a fog, and saw at least 5 meteors, 3 of them "nice ones." Sparklies! That woke me up! So I trotted off to get the camera. Naturally when you do get set up the show's mostly over, although I did manage to catch 2 small ones. I saw the ISS coming and just let the camera run while it traversed the sky. Problem is when

you've got the moon rising close to sunrise the sky kinda brightens up considerably. I see reports on space-weather that the Perseids are firing up, 4 of the ones I saw were likely Perseids, but the brightest one was south/north, so either random or a late Aquarid.

SUN/MON, AUGUST 4/5

Hank: Hey I went out observing tonight for the first night time session with the C9.25" this year. It was a good 2½ hours of just looking around and trying some DSLR. I still cannot figure how anyone has the patience to do astrophotography of any lengthy exposure. I took a few images of Altair and Alberio using a 20mm eyepiece in the adapter, they turned out, but that was about all. I guess I should have tried without an eyepiece first. Next time. The tracking on the Losmandy mount seems to work pretty well; I took some 30s star images and they didn't trail badly.

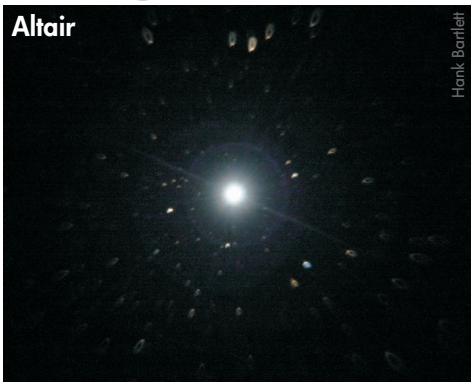
These are both 30s but the Alberio shot seems to show more trailing than the Altair one for some reason. The distortion from the eyepiece is terrible! I did also see three meteors as well as one satellite.

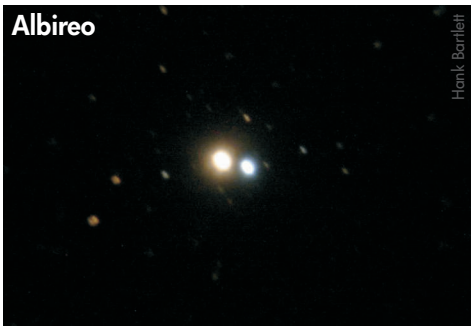
The slew rate is very slow so it is a move-by-hand, find-then-track effort but that is OK. I think I should have two Telrads so there is always one on top and easy to see through.

I want to try and get a daylight Jupiter this week; I tried to find it this morning but clouds kept getting in the way.

Rose-Marie: By golly, with the clear dark sky I actually got some sparklies. Could just barely make out lightness on the horizon, but aurorae did actually make an appearance. I rowed the boat across the bay, jammed it into the shallows near the beaver lodge, and set up the camera. I saw at least a couple dozen meteors but nothing shows up on the pictures. Here's one shot of the wee auroras at their peak. Going to go curl up on the couch for about an hour, then see what's happening.

Kim: Nice. Work had been done on the Torus most of the afternoon. **Brian Hunter** came out to help **Kevin**, so they were trying to make it work. The great news is we did see our first object through an eyepiece in the Torus. It was working enough to look at the Sun.





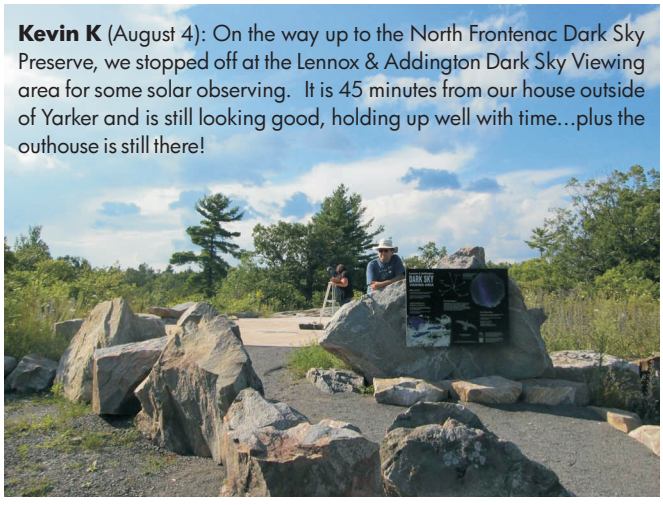
As the day progressed, Kevin got the LX-200 up and running and started imaging Saturn. I retreated to the non-electronics telescope to observe Saturn, Mizar, Alberio, Sagittarius, and a bunch of other gems. We saw several meteors and several satellites. We also saw both passes of the ISS. I thought I saw some faint glow in the north, but there was some high haze as well.

Susan: It was a nice night. Shortly after you posted this I got dressed and went out for about an hour to look for meteors. I caught four Perseids and two sporadics plus the ISS.

I had to return to the house at 4 a.m. because I was cold. I really bundled up and had a blanket over me but you know how summer makes you a bit wimpy. At least it kept the bugs away. Once you get settled under the blanket you do not want to have to swat about at them.

I will keep warmer shoes at the ready from here on in.

Hank: I managed to find Jupiter just before 11:30 this morning in the C925. I cheated and used the A720 at the eyepiece because we were going out and time was not there to use the DSLR. Here is one image from 11:27 EDT, ISO 80, 1/50s. I will have to try the DSLR but it is much more complicated.



Kevin K (August 4): On the way up to the North Frontenac Dark Sky Preserve, we stopped off at the Lennox & Addington Dark Sky Viewing area for some solar observing. It is 45 minutes from our house outside of Yarker and is still looking good, holding up well with time...plus the outhouse is still there!

Tue/Wed, August 6/7

Hank: In the continuing saga of finally getting back out there, late this afternoon after the gym, making pepper jelly, lunch with the mom and re-carpeting a step I headed back out to the C925. I was troubled as to why the RA setting circle would not move so I disassembled some of the mount and found years of grease had dried into a glue and locked it tight. A little thinner and white grease later it was rotating as it should. Also the Dec setting circle was off by about 10 degrees so I took that apart too and then discovered a tiny weeny allen screw was holding it in place. After putting it all back together I gave it a trial run on the Sun to Venus and it was "close." Like all numbered

hunts, it is only as close as your polar alignment.

Now tonight even though mostly cloudy I went back out, powered everything up and set out to learn about the NGC Max Computer (digital, I-can-find-it-for-you aid). I had always wondered what those tiny RA & Dec motors **Norm** had on the mount were, they are encoders! So I plugged them in clicked it on and set my alignment on Altair. Next I picked M13 from the catalog and went to guide, I was instructed to go right 47° and up 27°. Right –47, 46, 45, ... to 0 then up 27, 28, 29, 30... huh? Ok 27+27 would be 54 and it was going in the right direction so I kept climbing, sure enough at 54 I was very close. The final hit was 0.8 further right and 1 more degree up but then as I said "all numbered hunts, it is only as close as your polar alignment."

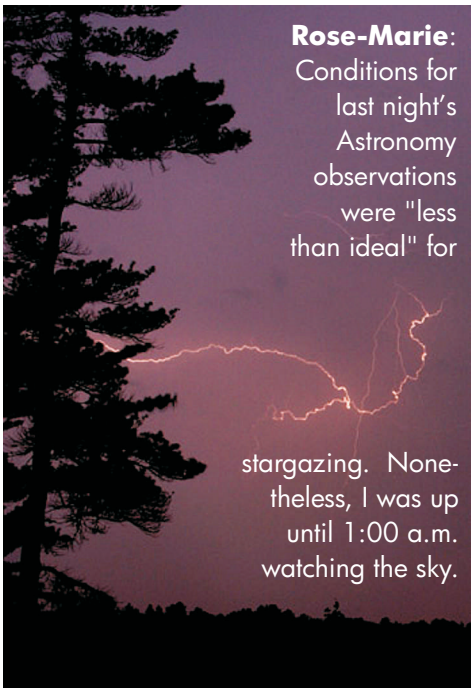
Getting polar alignment better will have to wait until fall as there are leafy tree branches in the way. Is the NGC Max worth the trouble? Well for me only if I was hunting for very dim objects, and I DO NOT do that. I could have found M13 much faster on my own. Now for daytime planets it would be a big help IF it can align on the Sun, but that would be cheating. I hope to get a chance to find Mars daylight but it is only mag 1.61 and 3.9". Mercury is –0.79 and 6.2" but it is also only 16° from the Sun.

Well that is it gotta get to bed.

Wed/Thu, August 7/8

Susan (*replying to Rose-Marie's electrifying image*): Beautiful! I was doing the failing-to-sleep thing and saw a few nice meteors between 3 and 4 a.m. It was quite clear with a few puffy clouds that gradually filled in a bit more.

Hank: It is not that long ago that sprites were myth, now they are not only proven they are being imaged so well. Digital imaging has changed so much in our world. As usual for the good and the bad but that is the way with everything.



Fri/Sat, August 9/10

Kevin K: Kim & I were out variously from 00:00-01:00 and 00:00-02:00 looking for Perseid meteors. It was hazy and not very clear here. As a partial result, meteors were fairly few and far between. The allsky cameras caught a few, but nothing in large numbers yet.

Rose-Marie: Sat at the campfire with happy campers from around 9:00 to 10:30, we saw 2 "really good" ones that were probably Perseids, a few smaller ones, and one medium from southwest to northeast, not a Perseid.

Set up the camera for a set-it-and-forget-it session at 11:30, while setting up the camera one really bright one flew just before turning on the camera. Left the camera to run 30 second exposures; came back to check it around 2:00 a.m., clouds were coming in, so instead of popping in another battery just took the camera in. No meteors, but got a nice series run for mini-video of Casseiopeia marching up the sky.

Got my rowboat ready; the plan is to head over to the bay around 10:30 or so, set up the camera and sit back in my air chair. Spaceweather promised a possibility of geomagnetic activity, but so far no indication of it.

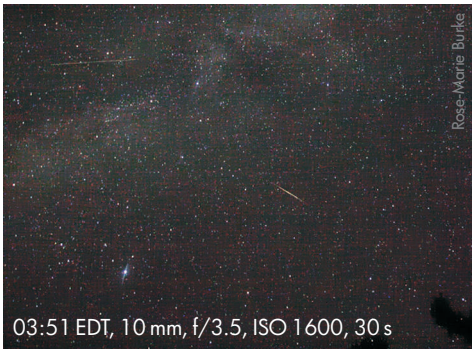
Sat/Sun, August 10/11

Kevin F: Ya right, clear tonight. I left my stuff outside, as it was to be clear. I wake up and the sky is cloudy.

Hank *reported that he caught only one meteor on camera of the five (plus three sporadics) that he saw in the 75 minutes he was out.*

Kevin K *was meteor watching from 00:00 to 01:00 EDT*: The skies are clear, SQMeter reading of 21.48. Cool: 12C up on the deck, 9C out at the observatory. In the 1 hour period, I spotted 15 meteors, consisting of 10 Perseids and 5 sporadics. Five of the Perseids were bright—magnitude 0 or better—leaving a visual train but still <1s in total duration: these guys are fast!

Rose-Marie: I got pics of about 7 meteors, none spectacular. The best meteor I saw at around 2:45 a.m. streaked across the sky, leaving a vapour trail that lasted about five seconds, and of course it was about 2° out of the field of view of the camera lens. I didn't think to keep count, but I saw at least a couple dozen meteors; sat out there 'til about 3:50 a.m. when I could feel the dampness settling in and the lens started to fog up. Back up to the house I went, and set the



camera at the window. Caught one as dawn was coming on, a faint streak in the brightening sky, probably would have been spectacular had it arrived during the dark hours.

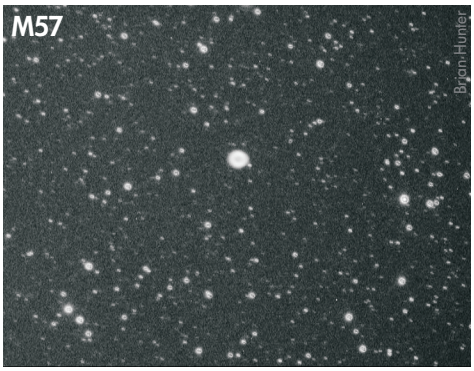
Brian H: I did a bit of testing of the centre's CCD camera [MX716] early this morning. Attached are two images taken through a badly polar aligned 120 mm f/5 refractor. The first is a single 20 second shot of M57 and vicinity. The second is the sum of sixteen 10 second shots of part of M31, stacked with Deepsky stacker using the best 16 of 32 shots. Both images have been contrast stretched. No dark frame or flat frame.

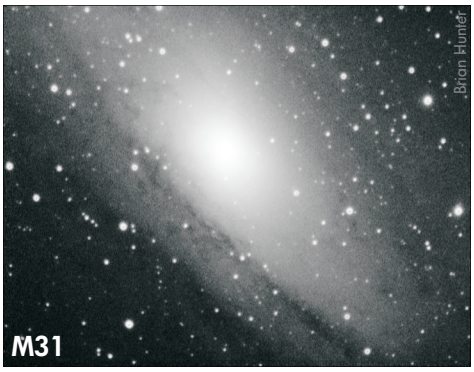
Kim: M31 was naked eye early this morning , and it was quite nice. More meteors this morning than yesterday morning (12:00-2:00 a.m.).

Sun/Mon, Aug 11/12

Kevin: Because today is a (#*$@# work day, we changed up our plans, went to bed a little earlier Sunday evening and got up at 03:00 this morning to go out and observe/image/count the Perseid meteor shower. Amazingly the Clear Sky Chart was correct and it was clear... very clear. SQ meter of 21.33, a little brighter than the day before but clearer, better transparency. We packed it in at 4:45 or so as the sky had brightened to SQM of 20.68 and Jupiter and Mars were in the eastern twilight.

Kim was doing meteor counts with her talking watch and tape recorder from 3 a.m. onwards. I lost count early on and went in to bring out another audio recorder...about 10 minutes of that and I noted the red LED on light was not. Back in to get new batteries. Then to find a clock. I took one out of the observatory, but it has a push button green illumination light. I think I am looking for a red LED clock that runs on batteries as well, for outside at a glance use.





We have an old clock radio in the house, but the battery only keeps time and does not power the display.

Lots of images were taken with the Canon Powershot A2400IS, 15 seconds each, probably no meteors in any of those. We caught many satellites, at least two Iridium flares, one was –8.2! Wow...only 2 km off the centreline. It was like a spotlight from a grow-op search helicopter!

We also spotted at least three bright (*i.e.* mag –2) flashes with no discernible satellite behind them. Interesting!

Rose-Marie: Set the alarm for 1:30 a.m., was so tired I smacked the snooze button a couple of times before my foggy mind remembered that the Perseids were flying. Tottered over to the door and looked out through bleary eyes and saw stars, eyes popped open, that got me in gear. Headed down to the dock, stomach still not trustworthy. Set up the camera and then lay back on the lawn chair. Got 3 "really good" ones. Soon lost count of all the small ones. This one has a timestamp of 3:23, settings are 18-55mm at 18mm, f/3.5, ISO 1600, 25 second exposure. ⇨

Hank: I managed to image Mercury (mag –1.2) this morning 13° west of the Sun at 10:10EDT in the C925. I was rushed for time as we were heading out shortly, I had intended to get Mars but that of course did not happen. Mercury currently is 84% illuminated with angular size of 5.6".

Paul W: Over 45 minutes [at dawn], I observed nine Perseids and one sporadic, plus two satellites (one rotating/tumbling) that passed through or near Perseus. Conditions were near ideal for Kingston.

Mon/Tue, August 12/13

Rose-Marie: Until after midnight I was chasing the few small holes in the clouds, pointed the camera at it, didn't get any pics. Saw about five small meteors, that's about it. Around 12:30 the last of the stars disappeared and I just managed to get up the hill and into the house when the rain came. Set the alarm and checked a couple times during the night, nothing but solid clouds.

Susan: I did not wake until 4:30, and did not venture beyond the deck, so limited sky; saw 4 or 5 really bright ones and a few fainter.

Hank: This image [August 13th, see next page] from 17:19EDT tonight shows the areas 1817 thru 1819 building nicely and ready to erupt in the next few days just in time to send us some aurora during full moon!

Hank posted a couple of reports after nightfall:

OK, last night I stayed up because the CSC showed clearing at 11, at 11:10 it started to rain. Tonight I just trusted clear sky overhead; here I sit under cloudy sky, camera and tripod ready. Oh wait, it is clearing once again.

The only reason that I went out observing tonight was a bright sporadic that seared across the NW as Di and I were sipping white wine and black russian (respectively). The meteor had a nice long tail with a bit of orange glow, the sky was clear and the temp decent as there was little wind in the hollow. Of course by the time I tucked Di in and headed out, the sky was intermittently cloudy and the ONLY Perseid I saw (a –1 with a 20° tail) was during the last 5s of the camera processing the previous image.

GOODNIGHT!

Kim: Nice, we got home and did some white light [solar] a bit later than your times. It is amazing how much the Sun changed from Monday to Tuesday.

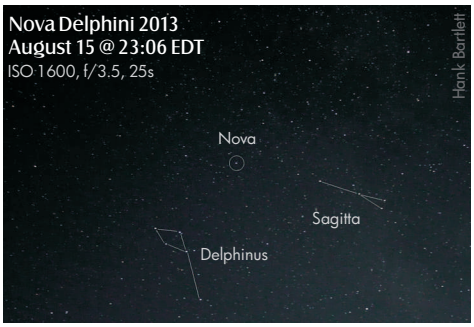
Wed/Thu, August 14/15

Rose-Marie: I went down to the dock around midnight; wanted to do a star trail shot after moonset to try and get orange glow. Didn't get the best shot. Set the camera up for a "series," let it run taking 30 second exposures, was hoping for a late Perseid. Didn't catch any. Of course, I SAW the most beautiful meteor running to the right of camera range, a beautiful bright orange ember that streaked across the top of the tree line, would have definitely made a nice shot.

Hank: It took some time and good sky but I found daylight Mars about 10:25 a.m. EDT (August 15). Mars is currently about 2.3 AU away, at mag +1.62 and 4" in angular size.

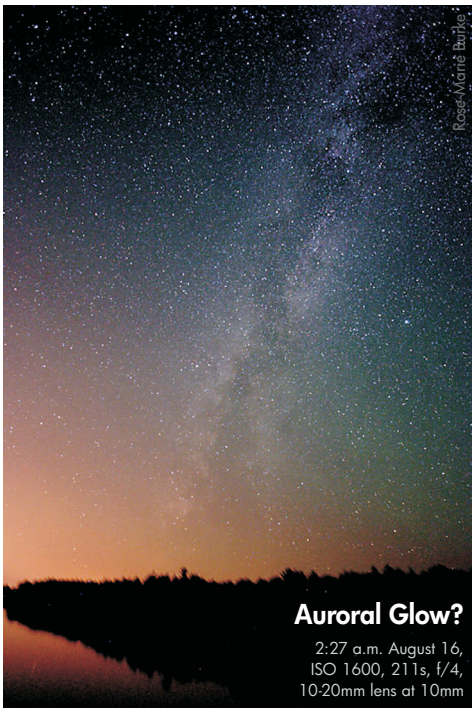
Nova Delphini 2013

Koichi Itagaki *of Japan discovered this nova on 2013 Aug. 14.584 UT at R.A. 20 23 30.73 Decl. +20 46 04.1 (2000.0). It peaked at mag 4½, so it did reach naked eye visibility for those with even just semi-dark skies. By the night of August 17/18 your editor observed it visually at mag 4.9.*



Thu/Fri, August 15/16

Rose-Marie: Managed to haul myself out of bed around 1:00 a.m., decided to try some barndoor tracker shots after moonset to see if I could pick some sky glow colours post moonset. Got my orange, and, to my surprise, some green outer glow. The aurora forecast looked promising around 11:00 p.m. but no sense in trying for that while the moon was so bright. Darned levels dropped the minute I got up to fire up the camera. At any rate...took a few tracker shots.



Rick W: I was out imaging the nova last night as well, both with just my tripod-mounted camera and with the scope and DSLR. I have a whole bunch of images from the evening of the 14th as I was doing time-lapse photography of the southern sky (which unfortunately would be post-discovery images since the **Itagaki** discovered it about 1400 our time). I was also shooting the same area the previous evening but most of the shots are clouded out. I think a couple show the right area without the nova.

I stayed up until 0130 last night to get in some imaging post-moonset but it clouded over just after I caught the telescope images of the nova. Rats.

Fri/Sat, August 16/17

Susan: Between 3:15 and 3:45 I estimate the brightness to have been 5.2, this is a bit dimmer than the reported values on the RASCals list but it was later and my first real attempt to do this.

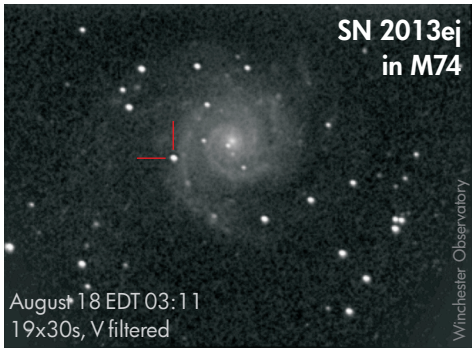
Sat/Sun, August 17/18

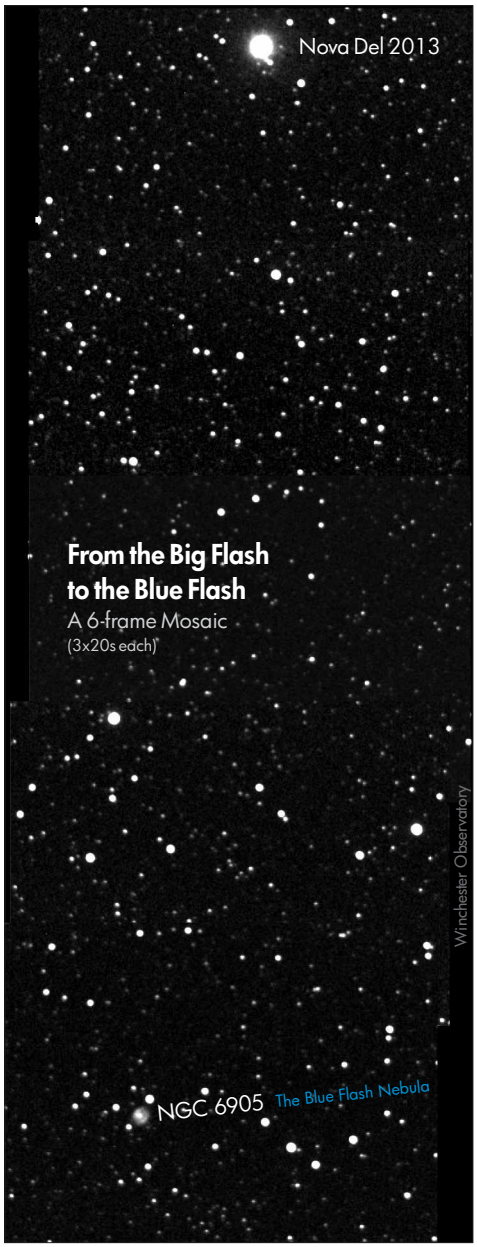
Kim: Good for you Susan, I woke up around 4:00 a.m., should have went out, but 20 minutes later we were socked in with fog...

Rose-Marie: Ah yes, that miserable fog! I got up set up at 1:50 down at the lakeshore, wanted to get a wider angle of the moonset, this time over the lake, hoping the wind would be still for reflections. I was all excited to see the last of the moon setting to be a nice red/orange. Started taking pics with the barndoor tracker, and along comes that miserable fog to spoil things.

Walter: I made my first visual estimate (with 7x50 binocs) of Nova Del 2013 last night. If you print out a chart for it (chart id 12508MG at aavso.org/vsp) you can have a go at estimating its brightness. It's been quite pleasant to see actual observing has taken over the RASCals list as a result of this nova—I can't remember that happening before! And the RASC members making an estimate of the nova, applying for AAVSO observer codes, and submitting their data is awesome!

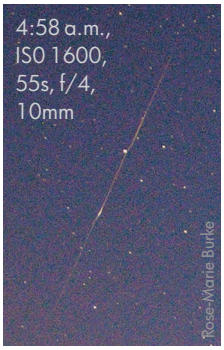
Yesterday I put a new motherboard in my dome and it ran like a champ last night! (I got a full load of Miras and a few CVs and also the SN in M74—oh and Nova Del 2013 too.) One change I made was to put a ¼" air space between the metal motherboard enclosure and the observatory wall. Since it is on the south wall, it tends to warm up on summer afternoons and I think that is what ultimately killed the motherboards (two in 10 years).





Sun/Mon, August 18/19

Rose-Marie: In spite of having had a glass of wine and yakking with happy campers at the campfire til 11:30 p.m. I managed to drag myself out this morning at moonset, wanted to see if I could get some orange glow sky colour. Dawdled a bit, may have missed a pillar. At any rate, set up the barndoor tracker and took a few shots; darned breeze was blowing and I didn't have a hat. When I got back to the cabin and looked at the pics, saw that I had a streak in the last shot: looks like a meteor. My bleary eyes were probably adjusting the knob or looking at the timer, so didn't see it happen. Didn't take long for dawn to light up the sky so I crawled back into bed.

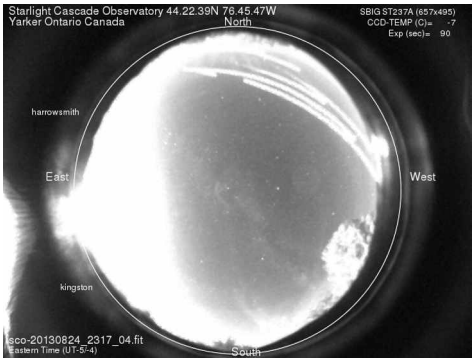


Hmmm...looking closely at that streak, I see two "warbles." Was this a satellite, and the warbles caused by the movement of the tracker when I turned the knob?

Sat/Sun, August 24/25

Kevin K: Did anyone see any strange UFO-type things between about 23:23 and 23:33 EDT? They appeared to be coming from west of our location passing to our north, heading east. We were not outside at the time although there were some fireworks to our north earlier in the evening.

At a guess I would say a fleet of helicopters spread out over time. Is it harvest time for various field grown crops that police helicopters may be looking for?★



Theories crumble, but good observations never fade.

—Harlow Shapley

No flash pictures or you will be shot at dawn!

—Isabel K. Williamson

Odds & Ends

Mark K: I pulled a Piggy today (April 21). One of the curses of entering the 50s is that I now need reading glasses to see things inside my arm's reach. Those who know me are familiar with the fact that I wear a pair of reading glasses on a neckband and have them with me always. Today I was picking stones out of the grass that had been pitched there by my winter shoveling. While bent at the knees picking up stones, I noticed a whiff of burning leaves. Looking down, the noonday Sun was shining through my reading glasses at just the right angle and height to set the leaves a smoking in twin places. Fortunately, the Sun's image is not as concentrated as it is with a regular magnifying lens, so it is not hot enough to make it burst into flame, it just smolders away.

Note to self: try to avoid accidentally doing the same thing with exposed skin...

Kevin K: The observatory Allsky1 camera system had a bit of rewiring this evening (August 8) as we suffered yet another power outage in Wednesday night's lightning storm and a loss of imaging for the rest of the session.

The whole of Allsky1 system—computer, camera, 12Vdc circulation fan—are now on the UPS. Yay.

For some reason the camera system was not. It powered off, the computer software couldn't see a camera and shut itself down as well. Presto: no more imaging for the night. That should be fixed now.

Rick Huziak: Supernova SN 2013ej is a fairly bright [type II] supernova, apparently peaking at mag 12.4. The progenitor star is apparently identified as a supergiant at magnitude 24.7! ... This is the third SN in this galaxy [M74] in the last 11 years! (SN 2002ap, SN 2003gd, and now SN 2013ej.)

The Tardis Observatory Project

Kevin Kell

UPDATE: JULY 22ND

We spent another two hours making upgrades to the Tardis on Saturday, July 20th: added three darkroom fixture lights (two white and one Kodak OC orange/red), added two 4"x10" floor vents, added two more 6" door hinges with reinforcement, adjusted the keyboard table, and did some other miscellaneous stuff.

We also spent four hours on commissioning the scope, identifying which limit switches apply to what operation, finding limits, finding homes, finding out what homes really mean, finding out what is working what is not, and came up in the end still a ways from declaring it operational. The software for the whole scope ("talon") stopped being developed in 2003 and there is no meaningful documentation that we can find for it. There is an operations manual for the *XObservatory* control program but we are looking for something more basic, *i.e.* the installers and first time setup manual.

Another two hours were spent on testing out some other ideas on Sunday, July 21st but in the end we were back to where we were at the end of Saturday.

Basically the telescope gets turned on, and once the first time installer stuff has been done and is correct (which we are not at), you tell the scope to find dec, RA, focus homes and it wheels around and ends up pointing at the zenith. Well, it is pointing to the north at –60° altitude, approximately 180° off in RA. That is the single most critical issue at this time. We have scoured through all of our old images of the setup in Ellis, gone over assumptions from the start, connected and disconnected clutches and optical encoders, reset configuration software files to base levels, etc.

The next steps involve getting outside help from those who have used and possibly setup the scope before and that will happen over the next week or so.

We are still (hopefully) on track to operational status at the beginning of September! ★

Dave Chapman: While working on the RASC *Observer's Handbook* 2014, I noticed a curious thing: the year 2014 starts out with a new Moon on Jan 1, and there is another on Jan 30. February 2014 has no new Moon! Then March 2014 is exactly like January. If these were Full Moons, there would be lots of attention! This can only happen in the month of February, as it is 28 or 29 days long, shorter than the lunar month (29.5 d), but it does not happen EVERY February. After March, the New Moon date is one day earlier every month, except Dec is the same as Nov, both on the 22nd...

Nothing "new" here, but I thought folks might be interested in how the New Moons line up with the calendar in 2014. The last time this happened was in 1995, one Metonic cycle (19 years) ago, and the next time it will happen is in 2033. ★

KAON Report: July 13

Susan Gagnon

There was a turnout of about 60; **Gwen** gave a great talk on various missions to Saturn with lots of great photos. There were also lots of great questions and the auditorium was air conditioned? This must be a new development!

I was back-challenged, so I did not lug any scopes around during the evening. Gwen's husband had their 8 inch SkyWatcher on the deck and views of Saturn followed. The air was quite turbulent but the scope performed very well. The Cassini Division was easily visible. ★

Of Libraries and Discards

Dave Chapman, Walter MacDonald

Our intrepid Observer's Handbook *Editor,* ***Dave Chapman****, posted this thought-provoking message on RASCals a few months ago:*

DISAPPOINTING DECISION
BY HALIFAX LIBRARY

The annual book sale by the Library got me to thinking about how they choose what books to discard. On a hunch, I checked their online catalogue and discovered to my horror...BOTH copies of Rükl's *Atlas of the Moon* have disappeared from their holdings! There was a reference copy, and a circulating copy—both gone!

Rükl's atlas remains the official reference for the RASC's Isabel Williamson Lunar Observing Program, and I had that circulating copy signed out on several occasions in 2009/2010.

I understand why they may need to cull novels and some other books to make room for new books, but they could not have thought long about discarding Rükl, as they might have discovered that it is out of print and is fetching good money on the rare and used book market. The copy I have is a bruised discard from Santa Barbara Public Library. I paid $50 for it.

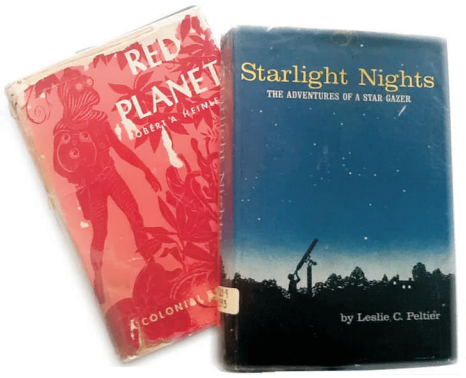
I can only believe that the rule they are applying is "old books, bad; new books, good," but some old books are perfect and timeless, especially if the subject has not changed in billions of years!

Clear skies, grumpily
Dave XVII

Walter: Well, I've always found Librarians to be a bit of a strange lot, so who knows what they are thinking? Still, the idea of discarding books from a library collection seems contrary to the purpose of a library! While a case can be made for updating a non-fiction collection to keep up with current knowledge, surely some items (and works of fiction) never go out of date. How can discarding such items possibly be justified? (As **Geoff Gaherty** pointed out, theft also accounts for the disappearance of some items, especially those in the reference section, but that at least is an unpreventable practice.)

Since Librarians are unlikely to change their well-established practices, we can at least derive some benefit from them: frequenting library book sales is an excellent (and quite economical) way of enhancing one's own personal library.

My first experience with library discards came in grade 5 when the school Librarian made the decision to put any book that hadn't been taken out in the past two years into the school book sale. As a result, I was able to add several works to my SF hardcover collection (thank goodness I hadn't taken them out yet!), including Heinlein's *Red Planet* which I'd been faithfully checking on for months to see if it had been returned yet. Turns out it had become trapped at the back of the shelf, unseen behind the other books, and so I was able to buy it for $1!



My best library sale acquisition came about 20 years later at the Oshawa Public Library, where I was able to pick up a 1st edition hardcover of *Starlight Nights* for 25¢! (At the time it was fetching $50 on the second-hand market at star parties.) I scoured all the tables several times because I knew the library had two copies in its collection, but I never was able to find the second one.

Library discards end up in second-hand book stores too, and I'm sure many of us have enhanced our collections through repeated visits to such establishments (though at somewhat higher prices than the humble library sale). As with observing, much of the joy is in the ongoing search and the anticipation of potential discoveries! ★

...President's Message

...continued from front page

Susan Gagnon

playing field that lies beside MacCorry Hall.

FALL'N'STARS

In an effort to avoid the cold this year and keep a favourable moon phase for observing, the Fall'N'Stars observing camping weekend is very early this year—September 6th and 7th—at Vanderwater Conservation Area, Thomasburg. Maps are available at rascbelleville.ca/fallnstars/

KAON SESSIONS

The KAON Queen's Open House nights will resume on September 14th at 8:00 p.m. There will be a talk in Ellis Hall room 324, followed by dome tours and deck observing if the sky is clear.

I hope to see some of you soon! ★

> ...to distinguish and map out correctly six Pleiades and see clearly the "Pappoose (Alcor) on the Squaw's (Mizar) back," counts a coup; ...seven Pleiades and the Pappoose, counts a far sight grand coup. (Those who habitually wear glasses may use them in this test.)
>
> —Ernest Thompson Seton, *The Book of Woodcraft and Indian Lore* (1912)

On Our "Royal" Appellation

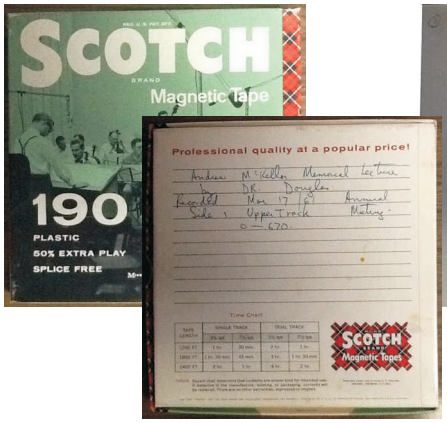
Randall Rosenfeld

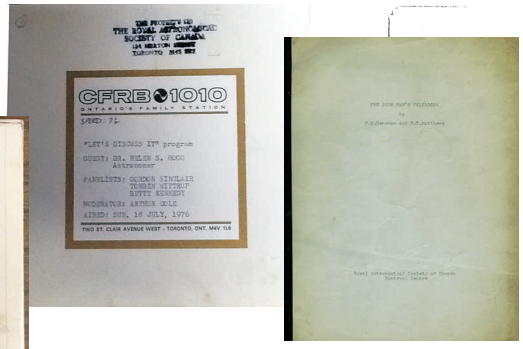
I NOTICE THAT THERE HAS BEEN AN ACTIVE DISCUSSION on RASCals of future directions and initiatives for the RASC. Well and good—it means members care. It strikes me that many of the matters raised ought most naturally to occur in the process of crafting our upcoming strategic plan. But that is not why I'm writing.

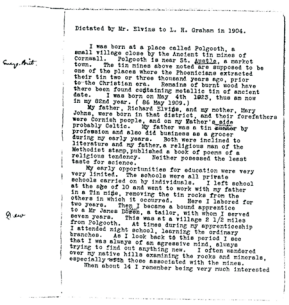
Apparently some members think the "Royal" appellation is somehow "off-putting" and "stuffy." They couldn't be more wrong. It is part of our brand, and a hard-won part, at that. The Royal Society (http://royalsociety.org/) have managed to remake themselves into very effective and cool social communicators in a way that doesn't betray their historical function as representatives of the highest standards in cutting-edge science. They have *become* socially relevant. Note that they have not changed their name—they are still the *Royal* Society. If they can do it, so can we. To the RASCals who query our royal appellation, I say to them that what is crucial to engagement is how we present ourselves, how we publicly interact with others, and how we each actively embody what it means to be dynamic members of the RASC. Changing the name will change nothing, for that is not where any perceived "stuffiness" may lie. If there is "off-putting stuffiness," it resides in us as individuals, and it is in our power to change that. It is up to us to how we chose to define ourselves as the *Royal* Astronomical Society of Canada, it is our attitude and actions which can make the RASC an effective part of the fabric of Canadian society. If we fail, the blame is not in our name.★

New on rasc.ca

Walter MacDonald







Digitization setup: A Sony reel-to-reel tape machine (ca. 1965) is fed into an iMac (ca. 2005).

The Sony gets hot—it has several vacuum tubes inside!

I HAVE REDONE the audio files posted so far. The quality is much better (no clipping and the mono format sounds better in headphones) and in many cases the files are smaller:

rasc.ca/ga-1960-audio
rasc.ca/ga-1965-audio
rasc.ca/ga-1968-audio
rasc.ca/ga-1974-audio

A new audio file has been posted of **Helen Hogg**'s appearance on CFRB's *Let's Discuss It* program for 1976 July 18th:

rasc.ca/helen-hogg-1976

THE POOR MAN'S TELESCOPE

This is a series of articles from the Montreal Centre, about building a 6-inch telescope.

rasc.ca/poor-mans-telescope

ANDREW ELVINS AUTOBIOGRAPHY

Two accounts are included, dated 1904 and 1913:

rasc.ca/elvins-autobiography

BEGINNING OF THE LONG DASH

This manuscript copy of the book includes extra material on the history of astronomy in Canada:

rasc.ca/beginning-long-dash

HELEN HOGG ON TVO

Thanks to **Randy Attwood** (Mississauga), we have audio recordings of two of Helen Hogg's appearances on a TV Ontario program circa 1970:

rasc.ca/helen-hogg-tvo

Unfortunately for posterity, TVO appears not to have preserved its early programs. This is made all the more poignant by Randy's memory of a TVO program he saw that featured **John Percy** and **Carl Sagan**, and is lost forever!

THE PERCY REPORT

rasc.ca/council/reports

This famous 1977 report on how to change the RASC for better long-term health is now online (for members only).★