



Regulus



The Newsletter of the Kingston Centre of the Royal Astronomical Society of Canada – August 2006

Coming up...

RASC Regular Meetings

Friday August 11
Annual BBQ at Mark Kaye's

Queen's University
Stirling Hall Theatre A
(note room change)
Friday September 8
Member's night

*Meetings are co-sponsored by
Queen's Physics and include
astronomy lectures open to the
public.*

KAON Public Observing

Queen's Observatory
Ellis Hall
Saturday Aug 12 9:00 - 10:30
Saturday Sep 9 9:00 - 10:30

AstroYak

*AstroYak is cancelled for
August and September*

Members Observing

August 19-29 Nirvana
September 22-24 See you at Fall
'n Stars!



Hank has a lineup at the Sky is the Limits Festival at Kingston City Park. Meanwhile, Susan takes a break from the hot sun. About 600 people visited the RASC display. That's more than any other of our public events



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President's Tid Bits

Kim Hay

It's hard to believe that it is the middle of July, and the summer is almost half over. The observing has not been the best for sure, and there have been wonderful gems to try and view, since some of them they only happen once in a life time, but we, being Canadians, have had to deal with Murphy's Law, "If there be an astronomical event to observe... there shall be cloud".

Thanks to Coordinator, Hank Bartlett, and all who attended in making Sky is the Limit Festival a great success on Saturday July 8. We had over 600 people throughout the day, from children with camouflaged painted faces to elder observers, who wanted to take up the hobby again. There were 4 different types of working telescopes, 2 for show, and Terry Bridges from the Queen's Observatory brought down the Coronado 70 mm for the solar show of prominences, which we counted 6.

At night we were at the Queen's Observatory for our public night. Several members were set up on the deck and a talk on Urban Astronomy was given by yours truly. There were close to 100 people there that night, with many we had seen that afternoon.

Our July meeting, with guest Speaker Guy Nason of the Toronto Centre and owner of the Neisse Observatory, spoke to us on Occultation's and IOTA (International Occultation Timing Association). Guy sort of inherited to be the main contact in Ontario, and probably Canada for lining up observers for timed occultations. I know he ended up with almost half a dozen of observers for the next occultation of Asteroid Carmen in mid August. For more information on IOTA and how to observe occultations, visit <http://www.occultations.org/>

Friday August 11 will have Kingston Centre members at Loughborough Lake at Markfest, home of Mark Kaye & Linda Santry. Directions are available on the Kingston Centre member's secure site.

Bring a salad or desert, a chair, bug repellent, and enjoy the night with friends and there is a Guest Speaker as well. Come out and have a night of fun!

Congratulations to past member and ATM chair Kendra Angle who will be getting married in Alberta in early August.

Congratulations to Kevin Kell on receiving his ETU (Explore the Universe) certificate at the July Meeting. For more information on this program visit <http://u99.n144.queensu.ca/rasc/funmem.htm>

Speedy recovery to members Rene Testa, and Donna MacMillan. Get better soon, and thanks for coming out for Sky is the Limit Festival.

September will see us meeting in our new room, Stirling Hall theatre "A". Remember our meeting in September will be our Member's Night, so if you are going to a Star party, or observing in your own backyard, and take a picture or a sketch, let us know about it, and we can share it at the meeting if you cannot make it. Send them to kim@starlightcascade.ca

I wish everyone some clear skies; some new toys that you may acquire at a star party or two, and may you all work on a certificate program or two. I am hoping to at least finish my ETU Certificate sometime soon, and grab a few more summer Messier's, and possibly some winter ones as well.

Till September, Clear skies, and keep looking up!



Laptop_Donation

Steve Hart

For the last few years, as the Kingston Centre has been converting from slides to digital images and has begun creating Power Point presentations for our speakers, our wish list has included a digital projector and a laptop computer.

A digital projector will allow us to give presentations at locations without modern audio-visual facilities. A laptop computer will enable those Centre volunteer speakers, who do not have a laptop computer, to begin using our new presentations.

We recently managed to solicit the donation of a Pentium III laptop computer from the local school board's "Computers for Schools" program, because of Centre member's public outreach activities under the "education mandate" of our not-for-profit charter.

The following are examples of recent activities that helped qualify the Centre for this donation; Astronomy Day presentations, displays and public observing at two charity events; "The Sky is the Limit Festival" and the "Relay for Life". R.A.S.C. Kingston Centre members also held several combined presentations and observing sessions at the Little Cataraqui Conservation Area and at two Girl Scout camps. As well, Centre members spoke at several schools in the Southeast Ontario area.

This laptop will be available for use by Centre members engaged in the following activities: educational presentations at schools and youth groups; educational presentations to the general public; developing new RASC-KC educational presentations; updating the format of our older educational material; presentations at our own meetings and also by volunteer speakers familiarizing themselves with the educational material that is available for our public outreach activities.

As mentioned earlier, this laptop will greatly help us to fulfill the Centre's education mandate. The laptop donation will also allow the Centre to purchase a digital projector a little earlier than we had expected, and that digital projector will also be available to members making educational presentations to the public.

The details of what digitized images and PowerPoint presentations are available to members planning to give public presentations will follow in another article.

Members who think they might be interested in using the laptop, digital projector when purchased, or our digitized educational materials should please contact the Centre executive for further details.



Target for Tonight

Susan Gagnon

Target for Tonight is an observing by constellation planning tool. See February 2006 issue of Regulus for a fuller explanation. Look for additions to the Target for Tonight each month.

Target for Tonight: Aquila

ETU: Altair, Eta 55Aquilae, R Aquilae.

Messier: none

Finest NGC: 6781

Levy List: 98 (NGC 6709), 110 (NGC 6760), 262 (NGC 6814).

Target for Tonight: Cygnus

ETU: Deneb, Albireo, Omicron 31, 16 Cygni.

Messier: M39, M29.

Finest NGC: 6819, 6826, 6888, 6960, 6992/5, 7000, 7027.

Levy List: 220 (NGC 6910)



New Classes of Membership

Kevin Kell, RASC-KC Treasurer

Article 6.2.4 of the RASC-KC Bylaws

Affiliate:

An affiliate member of the Centre is a member of the Centre who is a member in good standing of another RASC Centre and the Society, who has specifically applied for this class of membership, and who has paid the prescribed affiliate membership fee.

Eligibility for affiliate membership is subject to the approval of the prospective member's home Centre.

In the past someone who wanted to be a member of both Kingston and another Center would pay two full fees (on the order of \$60 each) and be a full member of both. Now that person would have to pay fewer fees, one full fee (say \$60) and only the centre portion for the 2nd center (in Kingston's case this is \$22 + \$5 surcharge = \$27)

Affiliate members have all of the benefits of a regular member of the center with one exception: they cannot be the National Council Representative.



June Lunar Observing

Ken Kingdon

We enjoyed a successful Lunar session #1 at Lemoine Point. Patchy clouds were forecast, and did arrive, but remained for only about 1 hour. Many huge "sucker holes" still allowed the five of us to carry right on. Weather was perfect (warm enough for just shorts this session - what a nice change from just 2

months ago!) - it was certainly the most pleasant night so far this year. Calm, very clear, no dew, a few mosquitoes initially - then gone - so no problem whatsoever. Seeing was only average (5/10) as Low Pressure from the east fought it out with a High to west. Nevertheless, it was the best weather we are going to get during the rest of this "floating period".

We enjoyed the company of three new members: Dave Clark, who simply heard about us and joined forthwith, and Luc Leblanc a college student and Nicholas Farkas from Dupont who took our last OAftN course.

The waxing gibbous Moon was 79%



Can you find Calvius in the picture?

illuminated. Some of the nice Lunar features seen at 120x or 250x were: Proclus, Messier-Messier 'A' (a hop-skip-and-jump twin crater), the rays and terraces of Copernicus, the prominent Jura Mountains around Sinus Iridum, Mare Imbrium, the Straight Range, Mount Pico, the volcanic domes in Alphonsus, Clavius, the ridge Dorsum Heim near Iridum, the avalanche in Plato. WHEW! Also, we observed the usual bright planets... Jupiter and

Saturn - still very close to star cluster M44, "The Beehive".

After most left about 11pm, of course the sky then cleared completely. Brilliant transparency allowed me to switch to some deep-sky objects. I was able to show Luc Leblanc M57 Ring Nebula, M4 in Scorpius, M13 in Hercules at 250x was still a WOW despite Lunar "light pollution", and the double stars nu-Draconis and Alberio. Then we departed, happy to have experienced a beautiful night.

Enjoy your Summer!



Observing and Filters.

Susan Gagnon

What follows is what is hopefully a helpful comment on filter use. This item and some graphs will be included with the centre filter set for you to check when you are using them.

Do you have a favourite combination of filter and target? Send it along to me and we can incorporate your tips in the material.

For example I know that some members swear by an orange filter to get the most detail on Mars. The Centre does not have an orange filter but may in the future (or you may be observing with someone who has one) so this info should be passed on.

Filters solve or greatly reduce the effects of two basic observing problems:

a) Irradiation is the fuzzying of a boundary between lighter and darker areas of the Moon or a planetary surface and can be caused either by the effects of highly contrasting light impacting the human eye or by the motion of

the Earth's atmosphere, through which the observation is made.

b) Contrast is the separation of adjacent surface regions according to their colour: for example, a light green area on Mars can become mixed in the eye with an adjacent light yellow area, to the effect that the combined area appears yellow-green, unseparated into its component regions.

Kingston Centre Filter List

What follows is a list of potential uses of filters as described by Meade in their catalogue. The Antares filters were compared to colour photos of the Meade products and comments were chosen on the best fit. Best results are achieved through trial and error due to the following factors i) the colour of detail on some planets are continually changing and ii) individual eye responses are vary slightly.

Antares No.80A (blue) 30% transmission. A popular filter for the study of Jupiter and Saturn. Enhances contrast of rilles and festoons in Jupiter's cloud belts, as well as details of the Red Spot. Brings out detail in Saturn's belts and polar phenomena. Very useful as a contrast-enhancing lunar filter.

Antares No.25 (red) This looks like a light red so is probably 25% transmission. Reduces or blocks transmission of blue-green wavelengths. Use on Jupiter and Saturn to enhance detail in the belts and polar regions. Sharpens boundaries between yellow-orange areas and blue-green regions on Mars, resulting in a darkening of edge-detail in the maria. Increases contrast between Mercury and bright blue sky during daylight observations or during twilight.

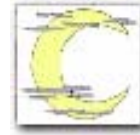
Antares No.11 (light green) 58% transmission. Observation of Martian polar ice caps as well as yellow-tinted dust storms on the Martian surface. Increases contrast of the red and blue regions in Jupiter's atmosphere as well as in the cloud belts. Also useful for enhancing lunar detail.

Antares No.15 (bright yellow)~74 % transmission. Contrasts strongly with blue coloured features on Jupiter and Saturn, while enhancing red and orange features. Lightens red-orange features on Mars while reducing or blocking the transmission, and there by increasing the contrast, of blue-green areas. Useful in increasing the contrast of lunar features in telescopes 6" or larger.

Antares Neutral Density I3? The inscription may be 13. ~13% transmission. ND filters transmit light uniformly across the entire visual spectrum. This uniform reduction reduces glare and irradiation when observing the Moon. May also be employed in the splitting of close double stars where one of the binary pair significantly exceeds the other in brightness. (On a personal note: I assume that this filter will also be good to observe the phases of Venus if you have trouble with too much glare. I have used my polarizing Moon filter for this purpose.)

??? no label dull green probably a lunar filter.

??? no label Nebula Filter, a donation of Hank Bartlett to the Centre . A narrow band filter zeros in on the three most important visible wavelengths emitted by deep-space emission nebulae: the two spectral lines of Oxygen III at 496 and 501 nm and the Hydrogen Beta line at 486 nm. Virtually all unwanted city light emissions are rejected by factors of 99.9 +%. This results in an increase in the level of



Observing Schedule

Ken Kingdon

August - Deep-Sky Observing at Nirvana

Floating Period: first clear night beginning Saturday, Aug. 19 to Tuesday, August 29.

Directions: from Hwy 401 at Napanee, drive north 1-hour on Hwy 41, to about 10 minutes past Bon Echo Provincial Park. At civic #19213, turn east (right) onto the gravel road called the "Irving Lake Airstrip Road". About 1 km after a bridge, look for an obvious "Y" in the road. Take the right branch up a small grade, proceed 100 meters onto the abandoned paved runway, then drive 400 m to its southern end. Park and set-up on the west side, off the abandoned runway.

Nirvana Notes:

- stay for one or more nights. Many other Ontario / Quebec observers may also be there.
- during the day to 8pm, dining is just 2 km south at Moosehorn Restaurant on Hwy.41. Don't miss their great breakfast each morning 9 A.M.
- camp fires are not permitted at Nirvana. No washrooms, except at Moosehorn Restaurant.
- camping is best done at nearby Bon Echo Provincial Park.
- if desired, motel accomodations can be arranged at the Swiss Inn in Denbigh
website <http://www.swissinn.northcom.net/>
or phone 1-800-844-0284

September

Observing this month at Fall'n'Stars ,
September 22-24.



June KAON Public Observing Session

Kevin Kell

The Kingston Astronomy Outreach Network held the regular 2nd Saturday of the month Public Observing Session at the Queen's Ellis Hall Observatory from 21:00-22:30 EDT. The weather was almost completely overcast but we did get a few holes to see Jupiter and the Moon, plus as a bonus, there were no mosquitos! Volunteers included Hank Bartlett, Norm Welbanks, Steve Hart, Kim Hay, Kevin Kell, and Susan Gagnon. Terry Bridges, Observatory Coordinator, showed off the 16" telescope and Dr. Stéphane Courteau gave two short talks inside to 17 guests. We had three telescopes outside on the Observing Deck, the 20 cm LX200GPS, the 20cm Fitzgerald Dobsonian, and Hank brought his 11cm equatorial newtonian.



STARFEST 2006

The Starfest Team

The North York Astronomical Association invites you to attend the 25th anniversary of Starfest. In keeping with the founding principles of the NYAA and Starfest, to celebrate this milestone, a special program has been prepared based on the theme "Fellowship Under The Stars". Using this theme we explore the rich diversity of activities that are available to today's amateurs and how these activities are shared with others. Observing and astro-imaging will be emphasized.

Starfest 2006 features over nineteen presentations and workshops, given by an astronaut and leading professional and amateur astronomers. This year's

stellar line up includes: Story Musgrave, Doug Welch, Terrence Dickinson, Scott Ireland, and many more.

Full details to help you plan your agenda are available on our website at www.nyaa-starfest.com.



Responsible Lighting and Your Home, Part 4

Kevin Kell

Over the last year or so I've been sharing our adventures of retrofitting our home exterior lighting to better conform to the principles of Responsible Lighting (use light only where you need it, use full cutoff fixtures to use the light only where you need it, and use appropriate wattages and not more than you need).

As the new price of electricity generation has now increased to 5.8 cents/kwh and 6.7 cents/kwh over the first 600kwh, with other charges doubling that base amount, you may want to go back and revisit some of the articles and perhaps save on some of your energy costs.

So back to our story... one day while browsing through the lighting section of the Home Depot, we saw the logo of the IDA (International Dark Sky Association) on a lighting product box. Intrigued we took a closer look and thought this would be an excellent replacement for the front door (see image 20060609-02.jpg) light, being both a motion sensor and a full cutoff fixture. Previous attempts at modifying the front door carriage light style fixture included replacing the 100 watt incandescent bulb with a 40 watt and then with a 10 watt white compact fluorescent and then finally a red 10 watt CF bulb.



This cut down on the glare and power usage but the light still had to be manually turned on and off (usually resulting in it being left on all night) and didn't really effectively light up the area of interest (the door keylock and steps).

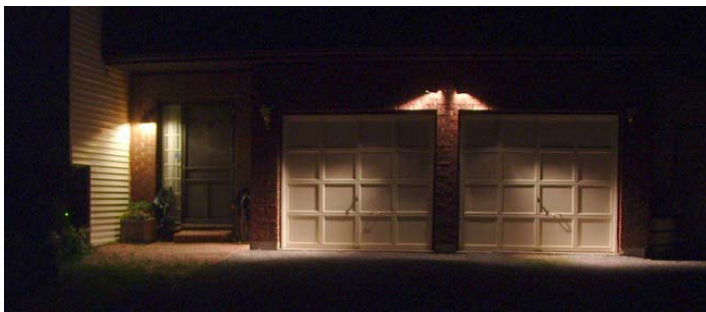
This \$50 fixture solved all of the existing problems. We are able to use a 14 watt CF white bulb, giving more than enough light where we need it, on a motion sensor so that it comes on only when needed, and is full cutoff, which wouldn't blind us by glare as we approach the steps.

You can perhaps see the difference in the before (above) and after (below) pictures.

Two of the carriage type fixtures on the garage have even had their bulbs removed permanently.



The before image shows approx 600 watts of unshielded incandescent lighting. The human eye adapts to bright point sources of light much like the camera meter and exposes for it, leaving much of the scene dark in comparison.



The after image shows approximately 60 watts of fully shielded compact fluorescent lighting with only a few bright hotspots of lighting on the immediate wall surfaces and much better even lighting.

We strongly recommend this lighting product by Hampton Bay and others like it approved by the IDA, especially with its motion sensor with many timing and sensitivity settings for your home.

-- Kevin Kell

From the Starlight Cascade Observatory just outside Yarker Ontario

RASC - Kingston Centre - Treasurer

The Kingston Centre of the Royal Astronomical Society of Canada

Newsletter Submission Info:

I can take most common formats, although I prefer plain text. Pictures should be sent as image files in attachments separate from the articles. Please avoid the use of capitals, asterisks etc for formatting, as I use the publishing software's formats for this kind of emphasis.

E-mail: angle@personainternet.com

Post: Doug Angle,

2006 Publication Deadlines

For the month

August
September
October
November
December
January 2007

Deadline

July 29
August 19
September 30
October 21
November 25
December 16

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Commercial advertising is \$20/quarter, \$40/half page, \$100/ full page and should be in electronic format.

Contributions are more than welcome.

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Kingston Cosmic & Events Calendar August & September 2006

By Kim Hay

For more detailed information, please refer to the **RASC 2006 Calendar** and the **RASC 2006 Observers Handbook**. Available from Kevin Kell or from National Office, <http://www.rasc.ca>

August Members Observing	First clear night beginning Saturday, Aug. 19 to Tuesday, August 29 at Irving Airstrip, aka Nirvana.	September 5 Tuesday	Uranus at opposition
August 2 Wednesday	First Quarter moon 4:46	September 6 Wednesday	Startrek begins 40 years ago
August 6 Sunday	Mercury at greatest elongation W (19 degrees)	September 7 Thursday	Largest Full Moon for 2006 14:42
August 9 Wednesday	Full Moon 6:54	September 8 Friday	RASC Kingston Centre Member's Night Meeting, Stirling Hall Theater "A" 7:30-10:00 pm
August 11 Friday	Markfest BBQ at Mark & Linda's house on the lake see http://members.kingston/~rasc/indexsec.htm for directions.	September 9 Saturday	KAON Observing Session- Ellis Hall Queen's Observatory 9:00 - 10:30 p.m. for more information visit http://members.kingston.net/rasc/pubobs.htm
August 12 Saturday	KAON Observing Session- Ellis Hall Queen's Observatory 9:00 - 10:30 p.m. For more information visit http://members.kingston.net/rasc/pubobs.htm	September 14 Thursday	Last Quarter Moon 7:15
August 12 Saturday	Ceres at opposition and Perseid meteor peak 7:00 pm	September 19 Tuesday	Saturn 2.7 degrees W of Crescent Moon best in NE of N. America 3 am
August 15 Tuesday	Last Quarter moon 21:51	September 20 Wednesday	Zodiacal light visible in East before morning twilight for the next 2 weeks
August 19 Saturday	Mount Kobau Star Party, Osoyoos BC www.mksp.ca (through August 27)	September 21-24 Thursday	Sunday Alberta Star Party- Caroline Alberta www.syz.com/rasc/asp.htm
August 23 Wednesday	New Moon 15:10	September 22 Friday	New Moon 7:45
August 24 Thursday	Starfest, Mount Forest Ont www.nyaa-starfest.com (through August 26)	September 22-24	Sunday Fall'N'Stars 2006 hosted by RASC Belleville & Kingston Centres at Vanderwater Conservation Area http://www.rascbelleville.ca/fallinstars/
August 24 Thursday	Saskatchewan Star Party, Cypress Hills www.rasc.ca/saskatoon (through August 27)	September 23 Saturday	Fall Equinox 12:03 am
August 25 Friday	Nova East, Smiley's Provincial Park, NS halifax.rasc.ca/ne (through August 27)	September 30 Saturday	First Quarter Moon 7:04