

A "Flameboyant" Prominence

Hank Bartlett snapped this great H α solar image on 2009 April 24 (Earth is superimposed for scale). Read all about Hank's solar imaging on page 8.

Regulus is Changing!

Kevin Kell

WHAT: Effective with the 2009 September issue, *Regulus* will no longer be produced on paper, by default, for all members. Instead we will only produce enough paper copies for those member who have specifically OPT IN between now and then.

WHY? Producing a paper *Regulus* newsletter is our single biggest expense line item. Technology marches on and we hope that many of our member will be happy with the online, high resolution, colour, and more timely Adobe Acrobat PDF file.

We realize that not everyone can or want to access this online only version. So as a compromise to see the effectiveness of this cost reduction, we WILL print and mail

out paper copies to those members who contact the Treasurer Kim Hay between now and August 30th, 2009 and tell her that you wish a no-extra-charge paper copy of *Regulus* for the next year.

The plan is to ask you again each year before September 1st to specifically and consciously opt-in.

HOW: *Regulus* is currently published
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Upcoming Meetings

Friday, May 8, 2009

7:30-9:30 p.m.

Amateur Radio Astronomy

Speaker: Marcus Leech, Shirley's Bay Radio Astronomy Consortium.

Friday, June 12, 2009

7:30-9:30 p.m.

TBA

Speaker: TBA

No meetings in July or August

Meetings are held at Stirling Hall Theatre "A" on Bader Lane at Queen's University in Kingston, Ontario. Our meetings are co-sponsored by the Queen's Physics Department and include astronomy lectures open to the public. ★



KAON Public Observing

Saturday, May 9

9:00-10:30 p.m.

TBA

Speaker: TBA

Saturday, June 13

9:00-10:30 p.m.

KAON (Kingston Astronomy Outreach Network) sessions are held at Queen's Observatory on the 4th floor of Ellis Hall. ★

Other Events

- | | |
|---------|----------------|
| May 2 | Astronomy Day |
| June 5 | Relay for Life |
| June 16 | IYA Lecture |

See kingston.rasc.ca for more information on these events.

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KC Receives New Telescope

Kevin Kell

OUR THANKS GO OUT to **William Florence**, for the donation of a 6" TAL newtonian telescope, pier, and accessories to the Centre.

The donation includes the following items: 8x finderscope, a set of seven 1¼" filters, a set of 1¼" Plössl eyepieces (6.3mm, 7.5mm 10mm,

12.5mm and 25mm), a pair of reticle adapters, a Cheshire collimator, and a few more miscellaneous adapters and parts.

The scope will be evaluated and added into the general equipment loan program catalogue and should be available by summer. ★



Regulus Needs You!

Items of interest from members—full articles, or even just a couple of paragraphs are always welcome. Deadlines for each issue are the last day of the month. Send items to:

walter2 (at) starlightccd (dot) com

or:

Walter MacDonald
PO Box 142
Winchester ON K0C 2K0

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Our speaker for the April meeting was **Wolfgang Rau**, and the talk was titled, *Observing the Universe from the Underground*.

Raised and educated in Germany, Dr Rau is a Canadian Research Chair and he has been at Queen's since 2006. His line of study is astroparticle physics and the Cryogenic Dark Matter Search is what occupies him these days. Previous data collection efforts in which he has been involved have taken place in Italy and in northern Minnesota at the Soudan Mine site near the border.

It was a well constructed presentation on the search for dark matter ranging from why we believe it exists, to the nuts and bolts of building detectors.

The chronology of observations leading to the theory of the existence of dark matter were: Fritz Zwicky and the measure of the velocity of the Coma Cluster galaxies, Vera Rubin's measure of rotational velocity of galaxies, and more recently, analysis of gravitational lensing. All mass estimates based on gravitational effects were at odds with what could be otherwise observed.

Next we were taken through the presentation and subsequent elimination of various candidates for all of this missing mass. In the end the subject presented for study is the WIMP, weakly interacting massive particle. Massive: in the range of a neutron, and extremely stable, not one of those figments of physics that pop in and out of existence! This is something that is assumed to have been here since the formation of heavy particles began. When and if the particles react with the detector (germanium and silicon) the source of the signal will be heat and ionization. With the low levels of

interaction hypothesized there are few expected to be detected, limiting of interference is essential, that is where the SNO Lab shines, being three kilometres below the surface. The detectors will also be cooled to 50 millikelvin degrees, less than 1 degree above absolute zero! There was plenty of detail given at a rate that I was unable to keep up with in my notes. It was all very interesting and cool! One extra bit of information that was included was that this experiment is by no means alone underground in Sudbury. There are at least 3 other projects underway at this facility. There seems to be no end to the use of this unique facility. ★

Special Events 2009

RASC 2009

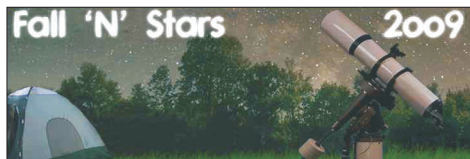
General Assembly
Registration is now open!

It will be held at Cypress Hills

Interprovincial Park, Saskatchewan (Centre Block—30km South of Maple Creek on Hwy 21) on August 13–16, 2009 in conjunction with the Saskatchewan Summer Star Party. Presented by the Saskatoon and Regina Centres of the Royal Astronomical Society of Canada.

More information is available at:

<http://homepage.usask.ca/~ges125/rasc/sssp2009.html>

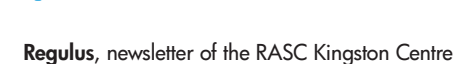


Fall 'N' Stars 2009 Star Party

Friday–Sunday, September 25–27, 2009 at Vanderwater Conservation Area Boy Scout Camping Area near Thomasburg, Ontario. This year is the 10th anniversary!

Registration is now open at:

<http://www.rascbelleville.ca/fallnstars/>



OUR IYA EVENTS STARTED OFF with *100 Hours of Astronomy* on April 4th and 5th. Our Saturday solar event was clouded which was moved to Sunday April 5th down at the **waterfront**. We had over 63 people show up to look at the Sun. On April 4th, we did hold the 100 Hour event at the **Queen's Observatory**, though the turnout was on the low side. We did have a wide array of 100 Hour videos from all over the world, and gave tours of the McGirr Telescope.

The **KAON session** on April 11th was well attended: over 163 people! (See page 9 for the full report.)



May 2nd is **International Astronomy Day**.

The Kingston contingent will be down at **Market Square** from 9:00 a.m. to 4:00 p.m. We have enough coverage, but we would like to see our members come down and say hello, and stop by. We will be having another group of Kingston Members having an Astronomy Day event at **Codes Mill's**, which will be attended by Fred Barrett, Leo Enright, and recently-joined member Frank Hitchens.

May 9th, will be our next **KAON** event. We hope to see you at any of these events! ★



Image: SLOOH.COM

April Observing Reports

Fri, April 10 Cantankerous Comets

Hank Bartlett: Hmm, comets are so uncooperative. At 9:30 p.m. Yi is only about 16° above the NNW horizon (out of my sky for Newburgh), then at 4:00 a.m. it is only about 19° up in the NNE. By 5 a.m. it is about 25 degrees but the sky will be getting lighter quickly. It will have to get some bit brighter for me to chase it. Good luck all.

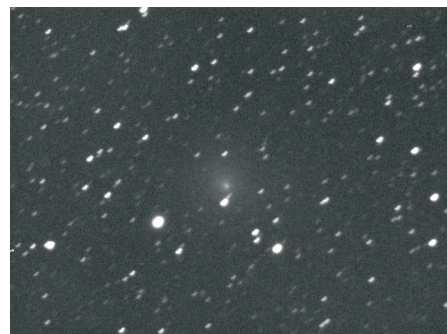
Sat/Sun, April 11/12 KAON Plays On...

Susan Gagnon reports: The last seven days have been very good for astronomy in Kingston and excellent for the Centre!



Comet Lulin Apr 11/12 in the feet of Gemini. Exposure: 11x30s. All images here were through a Johnson V filter.

Images: Winchester Observatory



Comet Cardinal Apr 11/12 just 1/2° from the magnitude 5.0 star 21 Aurigae. Exposure: 11x30s.



Comet Yi-Swan Apr 11/12 low in the NE in Cassiopeia at dawn, just 3/4° from α Cassiopeiae. Exposure: 12x30s.

Beginning last Sunday (April 5) with 63+ joining us for **solar observing** at Confederation Park downtown, six members joining our speaker for **dinner** on Friday before the **meeting**, 35 warm bodies coming out to hear the speaker, and last night at the **KAON** session, six Kingston Centre volunteers, a host of Queen's folk and 163 visitors to the dome, deck and warm-room for the talk! Needless to say it was a busy session last night. **Fred** did two presentations on his moon observing talk to a packed house, there were four scopes on the deck and I would guess that the visitors were pleased with the experience.

Comets Cardinal and Lulin were imaged during evening twilight. Then through the marvel of automation, 148 variable stars were imaged. Finally, after a good night's sleep (and hard night's imaging!), your editor arose at 5 a.m. and imaged Comet Yi-Swan.

Sun/Mon, April 12/13 Constantly Variables...

Winchester Observatory was pumping away all night, imaging 96 variable stars. The length of night is diminishing rapidly now: down to 7^h6^m, or 8^h24^m including twilight (don't waste all that twilight!).

Tue/Wed, April 14/15 Prominent Prominences

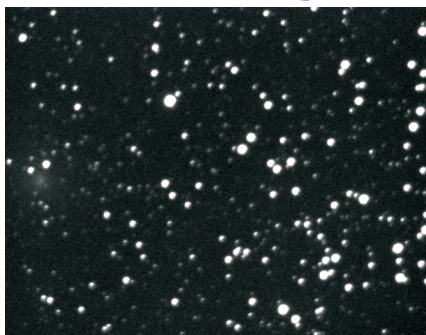
Hank imaged some prominences: I believe the one at the bottom of the image has been pretty much the same for 3 days now. As for the rest, well they are in the east so look out there may be activity coming!

Kevin Fetter reports on his satellite observing: As I was working last night, it was a perfect time to find out when the NSS K (21989) geo sat would flash brightly. It flashed brighter than mag 6 between 8:05 and 8:20 UTC (Apr 15) with the brightest flashes occurring around 8:10 UTC. I like geo sats that don't take a long time between flashes. NSS K gave a bright flash every 49 seconds.

Tonight, I plan to find out how good the Spacenet 4 (21227) will be good for flashing. Then when I am off, I can watch them flash, as I will know when they will approx be flashing brightly.

Winchester Observatory imaged 59 cataclysmic variables tonight, after imaging Comet Cardinal at the edge of the open cluster M38. **Your editor** was out with his C8, figuring that seeing Cardinal would be easy. Wrong! As it happens, neither Cardinal nor Yi-Swan were found visually. If only Yi-Swan were 10 degrees higher or a magnitude brighter...

April Observing Reports...



Comet Cardinal in M38 on April 15 at 01:09 UT. Winchester Observatory image: 9x30s, V filter, in bad seeing (42° altitude in NW).

Wed/Thu, April 15/16 *Seek and Yi Shall Not Find!*

Hank: I was coming home from Mom's tonight about 11:00 p.m. and realized that Yi would be positioned right over the house next door. Seeing as I finally figured out the new software, I took images at 64 seconds at various ISO's. I overlaid the images over StarryNight and NO COMET. I could identify stars to about magnitude 7 but that is all at ISO 400 or 1600 and 1600 is way too grainy. Has anyone else had any luck?

Kevin: Nope...got home and passed out for the night. The all-sky camera workstation has had some kind of failure as well. It was one of the nicest clearest nights in a while with no moon and I didn't get a single image in.

Winchester Observatory was pumping away on variable stars as usual on this night. As well, **your editor** was out for a quick 45 minute visual session with the C8. M65 and 66, NGC 3628 (just barely visible), M104, and Saturn were observed, along with a single short 2nd magnitude meteor streaking WSWward from near Regulus. It was indeed a beautiful night: temperature above freezing, and no wind at all! Transparency was average.

Kevin: Just came back in from looking at the moon in the early morning sky, something I rarely have done in the past. **Walter:** I have also been admiring the LQ moon in the SW sky the last couple of mornings as I closed the dome. This is yet another sign of spring!

Conrad Muis reported no luck seeing Comet Yi-Swan visually from Bancroft using a 14.75" under dark skies.

Thu/Fri, April 16/17 *Comet Phased by the Moon?*

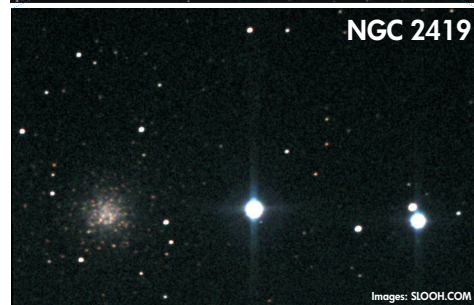
Kim Hay: I was out this morning trying to find Comet Yi-Swan. Yes the moon was up, but having no luck with the comet, I turned the scope to the moon: the terminator line was very impressive; I took a quick sketch of a crater to identify later. It was a nice morning: -4C, light wind, and some wispy cloud. *This wispy cloud has been around in the daytime for the last couple of days and is created by jet contrails. Does this stuff hang around at night, like it seemed to last night? It certainly seems to be much more common now than just a few years ago. If this trend continues, this could be a great threat to ground-based observing in the near future. Perhaps the next advance in amateur astronomy will have to be personal orbital observatories!*

Friday, April 24 *Steady as She Goes*

Hank Bartlett: Surprisingly the air was quite crisp today for solar observing. Just as surprising there were a dozen small prominences. The largest prominence was unfortunately the dimmest; I have increased the contrast and brightened this image as well as added an Earth inset for scale (see image on front cover). This one looks more like a

flame than most do. In past days the smallest of the prominences I saw today would just be blurs, but the air was so still and clear at lunch that I could resolve thin bridges of hydrogen from one to another.

Remember, only 8 months till Christmas Eve, get your astronomical wish list to your spouse (some items have to be ordered!).★



Astronomy, Sky & Tel Subscriptions

Kim Hay, Treasurer

The RASC Kingston Centre offers subscriptions to both magazines, at the discounted members (US \$39.95) price. *Sky & Telescope* now allows you renew your membership online at:

<http://www.skandtelescope.com/>.

Go to the "renew" section, and fill in the information. Your subscription number nine digits long. It is within the 18 digit number, and located as follows: move one number to the right, and count 9 digits over, that is your subscription number



If anyone is interested in the *Astronomy* magazine subscription (US \$42.95), send an e-mail to me: kingstonexec (at) rasc (dot) ca. The *Astronomy* website is:

<http://www.astronomy.com/asy/default.aspx>

Blast from the Past: Great Comets

From the *Transactions of the Toronto Astronomical Society* for the year 1901, pages 60-61:

Mr. Arthur Harvey forwarded a memorandum, of which the main points were as follows:—

A fair account is given in Suetonius of the comet which appeared very soon after the assassination of Julius Caesar. It shone with brilliancy for seven days in the northern part of the sky, and was thought to be an evidence that the decree of the Roman Senate, raising the dead Emperor to Divine rank, was recognized by the heavenly gods. The people said it was Ceasar's soul taking its place among the immortals. Virgil says that after Caesar's death, (Geor. I., 488) there were a number of comets, many earthquakes and volcanic eruptions.

The comet of 1665 was thought in England to have some connection with the great plague. It soon disappeared and its tail was stubby, wherefore the astrologers argued that the visitation would be short, as it was, for it had diminished before the great fire of London in 1666.

Mr. Harvey remembered his father's describing to him the great comet of 1811. That was the year in which the Duc de Reichstadt, Napoleon's son, the unfortunate "Aiglon," was born and crowned king of Rome. The comet was thought to be an unlucky presage for him and for Napoleon, and the next year was that of the terrible Russian campaign, when the winter setting in prematurely brought ruin on the host gathered by the French Emperor, and ultimately on him and his son. He himself recollected the Donati comet of 1858, which he thought extended at its best over 80° of arc. It could be

seen as soon as the sun was down, a great curved scimitar. The comet's head was to the north, not far from the horizon; the end of its tail to the south, also almost resting on the horizon, amid the great luminous arch spanned the sky between. It was as bright as the brightest aurora. The width of the tail increased regularly from the head to the end, which was not defined. It rapidly dwindled, not being more than ten days "in the public eye." A few years ago he saw it stated in Dunkin's "Midnight Sky" that on October 3rd, this body was noticed to be in a continual state of



Comet Donati (C/1858 L1) on 1858 October 5. This was the 2nd brightest comet of the 19th century and the first to be photographed. Source: E. Weiß: "Bilderatlas der Sternwelt" 1888.

local excitement, which was the date of a terrestrial magnetic storm. He was then enquiring if comets were often subject to excitement during magnetic storms. Finding this to be the case in many striking instances mentioned in previous papers, he was enabled to claim, at the "Centralstelle" of astronomy at Kiel, as his discovery, that in some way the solar disturbances which produced great spots and great magnetic storms, also produced changes in the brightness of at least some classes of comets. This view had been generally adopted since, for Deslandres' discovery showed how particles of matter could be driven from the sun or other bodies emitting Cathode, Becquerel, or other such rays, with the velocity of light, under

Bonus Blast

From the *Transactions of the Toronto Astronomical Society* for 1902, page 65:

An Observer's Requirements TO BE AN ASTRONOMER

The late Dr. E.A. Meredith, one of the presidents of the Toronto Astronomical Society, said that Sir William Rowan Hamilton, Astronomer Royal of Ireland, when asked, at a time when Saturn was favorably placed, if he had been observing that planet, replied "No, he left that for others—the mathematics of astronomy were enough for him." So even Sir Isaac Newton had Flamsteed make the lunar observations on which he depended for the verification of his theory of gravitation. One may be an astronomer without using the telescope. But, if one desires to be an observational astronomer, he must, according to Dr. D.B. Marsh, of Hamilton, (one of our council) possess:—

1. A sound physical frame.
2. Enthusiasm such that the cold of winter or the heat of summer, or even the feeling of weary bones by night or by day, will not prevent observation and making records thereof.
3. He must use faithfully what equipment he has and remove the word "can't" from his vocabulary.
4. Undertake work that seems to him difficult and stay with it until he has mastered it; then take up another problem and persevere with that likewise. ★

the influence of charges of negative electricity, which removed the difficulty—how electric impulses from the sun could reach the subject bodies of his system. ★

My First Great Comet

In June 1980 I took delivery of a brand-new Celestron 8. Very soon I was spending many happy hours tracking down all sorts of deep sky objects. I can even remember looking for **Comet Panther (1980u)** near Polaris without success. However, it wasn't until the summer of 1982 that I finally saw my first comet: **Comet Austin (1982g)**. Predictions called for it to peak at 4th magnitude, though it seemed to fall a magnitude or so short of this mark. Still, it was a big thrill for me to observe it. In the scope it looked like a big, fuzzy globular!



Comet Austin 1982g photographed on 1982 August 25/26 on Ektachrome 400 film near Enfield, Ontario.

Fortunately I did not have to wait as long for my second comet: it came just nine months later, and it was destined to be the great comet of the 1980s!

Comet IRAS-Araki-Alcock (1983d) was initially discovered by the Infrared Astronomical Satellite (IRAS) which at the time was in the process of revolutionizing the nascent field of infrared astronomy. Human observers were not far behind, with independent discoveries by **Genichi Araki** of Japan and the already-famous **George Alcock** of England. Interestingly, Alcock

discovered IAA with binoculars from inside his house!

Information was much slower to spread in those days, but pretty much everyone knew about the comet by Monday, May 9th. By this time **John Bortle** had estimated its brightness at magnitude 2.7 and **Doug Welch** had reportedly seen it with binoculars and with an 8" scope from downtown Toronto, so expectations were high!

As it turns out, we were not disappointed. IAA approached earth on May 11th more closely (4.5 million km) than all but two comets since 1700, and this was largely responsible for the good show it put on. IAA was just visible to the naked eye from Oshawa, and unmistakable from the country. This is all the more impressive given that it was a very diffuse comet about $\frac{1}{2}^\circ$ in apparent diameter and with no visible tail. The close approach also made this comet, to quote **Zaphod Beeblebrox**, "one mother of a mover!" While guiding on the head of the comet (this was a time before autoguiders), I could see it steadily moving past stars in real time—spectacular! Indeed, on Monday night it was very near Kochab (β UMi); on Tuesday night it was down in western Ursa Major; on Wednesday night it was near the Beehive; on Thursday night it was low in the south in Hydra. The window of opportunity for observing this comet was barely a handful of nights; amazingly, the skies were clear from start to finish!

Wednesday night, May 11th, was the last time I observed and photographed IAA. Since the sky was holding and the comet was so spectacular, I decided to do a third session out of town. This would have



Above: Comet IRAS-Araki-Alcock on 1983 May 11/12. 135mm f/2.8 lens, 15 minutes on Ektachrome 400 film. **Below:** Venus and aurora in Auriga. All photos on this page by Walter MacDonald.



the added advantage of using up the roll of film more fully, prior to sending it away for processing. (Remember how hard it was to use up a roll of 24 for astrophotography?). The night was very cool, with a light south breeze that died down after a short time. I was able to finish two rolls of film and start a third, thanks to a nice auroral display. Venus set so late in the NW that it became a morning star! (I lost sight of it about 10 minutes to midnight; ECU tells me that it was 2° up at this time and that its actual setting time was 00:07! Of course, daylight savings time helps here too—is that cheating?) IAA was very close to the Beehive to start, but

Continues on page 10...

Web Links

Closest Approaches to Earth by Comets:

<http://www.cfa.harvard.edu/iau/lists/ClosestComets.html>

Discovery of Comet Panther:

<http://www.nmhs.info/astro/asthpanther.htm>

In early January 2009 I opened the mail lobby door at my post office to begin sorting the mail and there before my eyes was a Coronado box, my SolarMax 60 had arrived!!!! There went my concentration for the rest of the day.

First light, due to weather and circumstances was not until January 14th (a week later) and was disappointing at that. Solar activity has been very low for months, even in H-alpha I only imaged one tiny (but Earth size) prominence that day.

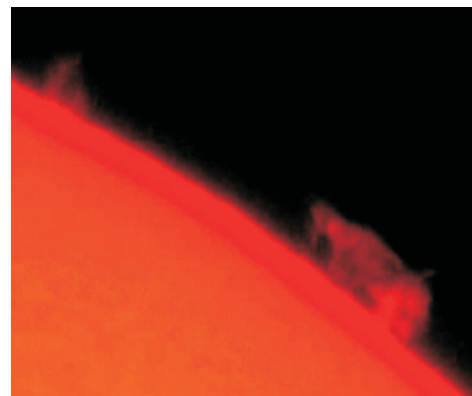
Not being one to buy expensive digital equipment or understand its use, I use only a simple point-and-shoot Canon A720IS at the eyepiece. Since receiving my SolarMax 40 in May of 2007 (then imaging with a Canon A40) I have taken thousands of images, taking as many as 300 in one session. Snapshot imaging may not have the resolution of CCD or webcams that have been “stacked” but it is quick, and good enough for my purposes. Once image exposure, contrast, and colour is adjusted on my laptop I can get very satisfactory images at low cost with little work.

H-alpha captured my interest because much of observing can be quite static whereas the sun, although currently rather boring, is usually different every day. The method of imaging is rather simple: place the camera to the focused eyepiece at eye relief distance and fire away. I do not use the camera mount that I use for night imaging/observing as the digital displays do not illuminate

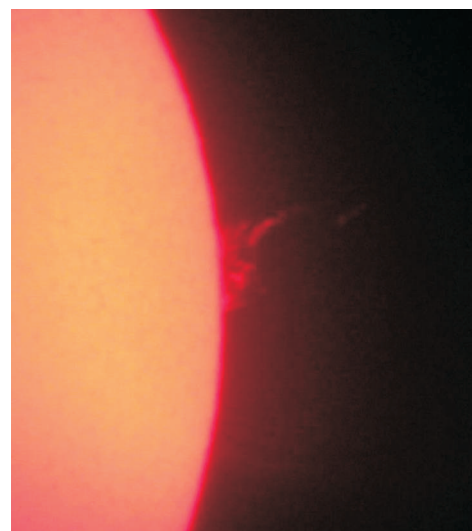
well in the daylight. Doing so would make visual observing difficult by having to swing the camera back and forth, even under a black shroud. I take a minimum of three images per exposure speed and shoot at least five different speeds. I have found that different prominences, depending on their density, will show up better when over exposed. You must remember, especially this time of year with the sun low in the south that atmospheric turbulence is a major factor in imaging. It takes just one “still” fraction of a second to get that one special image, so don’t be stingy. In the age of filmless photography anyone can shoot hundreds of images to get that “one” excellent shot; shooting fewer is surely a waste of opportunity.

Upgrading to a SolarMax 60 when a great sale came along was a wise decision, regardless of the fact that the exchange rate worsened by 20% by delivery time. DANG! I can now shoot images at up to five times less exposure, which helps eliminate some of the atmospheric interference and resolution is much better when observing.

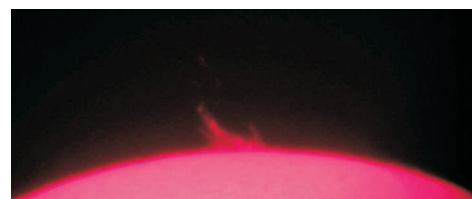
The image(s) accompanying this article are an example of 2009 observing to date—hopefully they will copy well for the paper edition of *Regulus*. I am looking forward to the climb to solar maximum over the next few years and shooting another 5-10 thousand images. ★



Solar prominences in H α on 2009 January 20. Exposure 1/20s at ISO 80. All images on this page were taken afocally by Hank with a Canon PowerShot A720 IS and his new SolarMax 60.



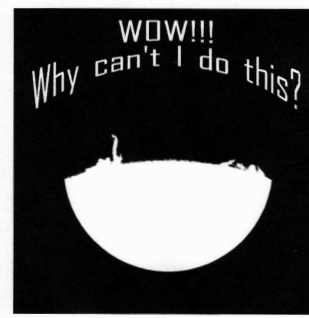
2009 February 8: **Above:** exposure 1/60s at ISO 80. **Below:** 1/15s at ISO 80.



Be sure to visit Hank’s website at: <http://members.kingston.net/knah/knah.html>
See more of Hank’s pictures at: <http://www.kingston.rasc.ca/gallery.php>

A photograph of the solar prominences, made at the Kenwood Observatory by Professor Hale, was much admired; this was taken without an eclipse, and was considered a very great triumph for the distinguished observer. —*Transactions of the Astronomical and Physical Society of Toronto*, 1894, p.101 (report on the meeting of October 30th).

NEWT by E. Kiptik



Some characters in this cartoon are adapted from The Print Shop E

The Big One: 1989

Walter MacDonald

MARCH 12TH MARKED the 20th anniversary of the big Aurora in 1989. This **aurora** put on a modest display in the evening, and I watched it a bit then and again after midnight. Around 1 a.m., as I stood in the backyard in Oshawa, I thought about going in to watch *Star Trek* on TV. However, I was having a nice time watching this pretty-good aurora so I decided to stay outside a while longer. At 1:10 the aurora suddenly went bananas and covered the entire sky in incredible activity and intensity, raining down to the eastern horizon in **all different colours** and shimmering like crazy. It was almost overpowering—truly a once-in-a-lifetime experience (at least so far)!



No other aurora I have seen before or since has come close to equaling this. I did take a few pictures like the one shown above, but the film and the constricted view of a 28mm lens just couldn't do justice to the display (an all-sky camera would have been perfect for this occasion). As it happens, what started out as a pretty ordinary night of observing (if there is such a thing) turned into a **memorable night** and a lifetime memory.

Hank Bartlett comments: Thanks for the reminder, I remember it well. I got out of the village and drove up onto the flats north of the burg; I was surrounded by this giant “chandelier” of light. It was one of those nights that I swear I “heard” them **tinkling** in the sky, it was eery actually. I have, as you stated, never seen anything like it since. ★

Sound in a Box 4

Kevin Kell

KIM & I ATTENDED the first of two performances of *Sound in a Box 4* last night (April 23rd) in Kingston.

I'm not sure how to describe it...think of a 60's-era beatnick poetry reading combined with wonderful live music (cello, guitar, horns, and banjo... banjo...think of the opening strains of *Hitchhiker's Guide to the Galaxy* meets *Deliverance* with live stories, live poetry interspersed with mystery science theatre, astronomy, and space dialogue!

This was a benefit for CFRC radio at Queen's, sponsored by the Kingston Arts Council and performed outside of a box: that is, the audience (about 25 of us) were on chairs inside a 7 metre by 7 metre curtained box inside an old gym, with the sound and performers outside the box...Live Radio. With animated video being projected from the outside onto the “wall” of the enclosure.. animated SOHO video of the Sun, Cassini approaching Saturn, simulated models of large scale galactic clustering...

Congratulations to **James Silvester** and **Terry Bridges** of Queens Astronomy for their parts in this production. This was recorded and will be broadcast of CFRC radio at some point in the future. See <http://www.cfrcradio.com/>

The astronomical content of this performance made this an IYA event. We also handed out some IYA material and helped out with some equipment.

It was fun. Some of the poetry was a little strange...no...stranger than that.. obtuse? Eclectic to the max? I think our past president-for-life, **Ian Levstein**, would have enjoyed it though! ★

KAON Report: April 11

Susan Gagnon

THE EVENING WAS CLEAR and the summer hours were in effect so we began arriving around 8:30 p.m. **James Silvester** had the Queen's LX-200 and the Questar out on the deck already and **Steve Hart** was arranging his traffic control station with posters and handouts. I set up the Fitz and soon **Hank Bartlett** arrived with his 4" reflector; **Kim Hay** and **Kevin Kell** moved onto the deck to man scopes and help manage the evening's activities. James's volunteers for the night were: **Daniel Foreman-Mackey**, **Cédric Grenon**, and **Terry Bridges**. As usual, before set up was complete there were visitors streaming onto the deck.

The newly re-arranged warm room is looking good with the seating opening up even more. **Fred Barrett** had prepared a talk on *Observing the Moon* and with the 163 visitors he was pressed to do a 2nd presentation to a packed house. All of our IDA brochures were picked up and several people asked about memberships. The centre laptop displayed the *Virtual Moon Atlas* on the centre data projector and screen out in the hallway and more than a few people stopped by to take good looks at the lunar map.

Construction lighting remains an issue: the KGH crane was the chief offender this weekend, but we were able to make a fine evening of it nonetheless. Targets included M42, M45, M44, M36, M35, and Saturn, with both scopes and binoculars. There were constellation tours including the Big and Little Dippers; several visitors thought that the Pleiades was the Little Dipper (I have heard this often).

Thanks to all of the RASC and Queen's volunteers who made the night a smooth success with so many visitors. ★

...Regulus is Changing!

...continued from page 1.

10 times/year (September-June), odd numbered months on paper and mailed out as well. It is not published July and August, coinciding with the time when we take a summer recess and do not hold regular meetings either.

We hope to achieve at least a 50% drop in paper publication costs and optimistically 75% or more.

WHERE: Lastly we have surveyed other Centers in the RASC and currently we are one of the last to

produce complete paper runs for all members, all of the time.

HOW TO ASK FOR A ONE YEAR PAPER SUBSCRIPTION:

Contact the Treasurer, Kim Hay:

- ▶ by e-mail at [kingston\(at\)rasc\(dot\)ca](mailto:kingston(at)rasc(dot)ca),
- ▶ by postal mail to the Centre address (see page two),
- ▶ by telephone to the RASC-KC hotline at 613-377-6029,
- ▶ in person at any meeting or event. ★

Observing Summary

David H. Levy

In early April I was thinking how nice it would be to hear what our Centre's Honourary President has been up to observationally. Not only did David agree to write something, he did so in just a couple of days! Thank you! If you haven't already done so, be sure to visit his website at www.jarnac.org —Ed.

April 9, 2009

Recently I was honoured to be asked to write a brief article for *Regulus*, the Kingston Centre newsletter, about the observing that I have been doing.

When I left Kingston in 1979 for Arizona, my main goal was, and continues to be, the **search for comets**. However, back then I was also involved in variable star observing much more than now, specifically the **Orion variables** that tend to “flicker” in the heart of the Orion Nebula. Scattered also in some other areas of the sky, specifically Corona Australis, these stars are a real pleasure to watch, a symphony of delicacy. They can change by a tenth of a magnitude in as little as a few minutes!

I also have supported **Leo's program** regarding comet searching, which is based on a older model run by the Montreal Centre in the 1960s. It involves dividing the sky into specific numbered areas and assigning these areas to interested observers. Off and on over the years I have participated in this (and Leo, if you could assign me a spring area at about -30 degrees, I'd be happy to start over and add it to my work!).

As the years went by, my focus narrowed considerably. During the 1980s and 1990s it was almost exclusively **comet searching**, which paid off handsomely although it was a lot of work. After Shoemaker-Levy 9, however, the great professional surveys took over the search for comets and asteroids, and my own ability to stay in the game almost vanished. However, on October 2, 2006, I discovered my 9th comet visually (22nd altogether) as it swung past Saturn in the predawn sky. This find was especially fun, and I look forward to seeing it again when it returns at the end of 2011.

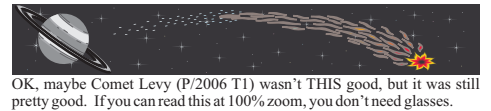
Recently I have expanded my outreach activities with the launch of

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OK, maybe Comet Levy (P/2006 T1) wasn't THIS good, but it was still pretty good. If you can read this at 100% zoom, you don't need glasses.

our **Sharing the Sky Foundation** (<http://www.sharingthesky.org>). We enjoy sharing our telescopes with school children and other people from all walks of life. On May 2nd we have our annual *Sharing the Sky* star night at the University of Arizona.

Thanks for inviting me to write this report; enjoy the IYA! ★

...Anecdote

...continued from page 7.

moved away as the night wore on. I tracked it well down to the horizon, losing sight of it about 1:45 a.m. It was truly a session to remember!

Although other naked eye comets would come along in subsequent years, IAA's display wouldn't be exceeded until the spectacle of **Comet Hyakutake (C/1996 B2)** in 1996, but that is another anecdote for another time... ★

Comet IRAS-Araki-Alcock



Photo: Walter MacDonald