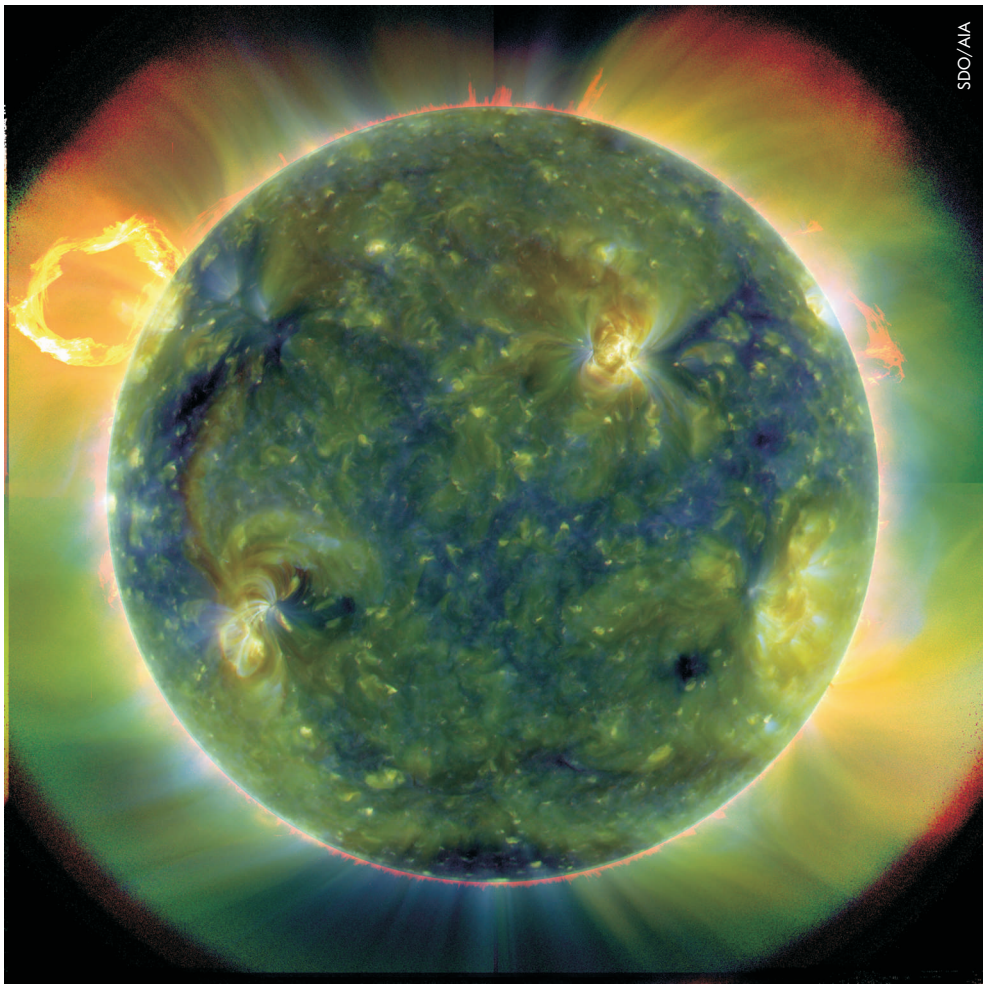
June 2010

Regulus

RASC Kingston Centre



Solar Dynamics Observatory Snaps Sunsational Images

A full-disk multi-wavelength extreme ultraviolet image of the sun taken by SDO on March 30, 2010. False colors trace different gas temperatures. Reds are relatively cool (~60,000 K); blues and greens are hotter (> 1,000,000 K). You can see the full story, plus more images and videos at:
http://science.nasa.gov/science-news/science-at-nasa/2010/21apr_firstlight/

Reports & Other Items

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

Video Brings Fame, Fortune

Hank Bartlett reports that his brother Andy's video of the incoming Buzzard Coulee meteorite (see *Regulus*, Jan. 2009, pg. 1) was used in a low budget horror film shot in Alberta. On the night of the premier they picked him up, treated him to the movie as a special guest and then drove him back home. Apparently the movie is called *Day One* and is about some kind of alien invasion or organism from the meteorite. The movie opens with Andy's video and the news announcer saying something like...and here in this amateur video shot by **Andrew Bartlett** from his tenth floor apartment... Pretty cool; actually they asked him to be in the movie as well and play a main character but he turned that down. At the end of the movie he also gets acknowledgment for the video. No $$$ but a free night out.

Still in the works (apart from all the initial exposure) is the video's use in a documentary which will pay him $25.00 for every second of use.

Upcoming Meetings

Friday, June 11, 2010

Regular Meeting 7:30-9:30 p.m.

🗣 *Randy Attwood, President, RASC Mississauga Centre*

The Apollo 11 Landing—and How It Nearly Failed

(Summer Break: July-August)

Friday, September 10, 2010

Members' Night 7:30-9:30 p.m.

Meetings are held at 7:30 p.m. 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. ★

More info at kingston.rasc.ca

In this issue:

Kevin Fetter Makes News Again

Kevin has made yet another big splash in the global media, including the *New York Times*, and *Globe and Mail*. This time it is for his observations of the "secret" X37-B shuttle. Way to go, Kevin!

The Next Carl Sagan?

One of the best videos we've seen recently shows **Neil deGrasse Tyson** answering the question of belief in UFO's. His answer is brilliant, and most entertaining to boot. Could Dr. Tyson be the next Carl Sagan? Sorry to put that burden on you doctor, but heroes these days are few and far between and we need all that we can find! Watch the video at:

wimp.com/believeufos/

Continued on next page...

...Reports & Other Items

Science Fair Request for Volunteers

Susan Gagnon *reports*: I received this request and I am passing it along to the membership:

The FLASF committee is looking for additional volunteers to join the group and I wondered whether any of the members of the local RASC would be interested in helping? We are looking for help with fundraising and special awards, and also with publicity (for "local community," and for students to encourage/ increase participation). This would require some ongoing effort starting in September 2010 through till April— it's not a great lot of work but ideally needs some flexibility of time, for example to phone sponsors during weekday working hours. Could you please pass this on to your colleagues and ask them to contact me if they are interested and I can provide more details. The email address is sponsor@flasf.on.ca and telephone 613–542–6657.

More Outreach

Hank Bartlett *reports*: Today I represented RASC-KC by reading to the grade 7/8 class at Newburgh Public School. I read brief stories from *NightWatch* and *The Universe and Beyond* as well as the note I wrote to RASC-KC this morning (see *Awestronomy* on page 3). We discussed reading and astronomy and how important reading is in both work and hobby. The class was given some left-over 2009 IYA handouts and was also advised to watch for the ISS this week if it clears (I left them a pass printout).

I made arrangements with the grade 6 teacher to come back next week and speak on meteorites or do H-alpha observing depending on weather (see page 6). It was nice to be back in the classroom.

Searching for the New Moon

Susan Gagnon *reports*: **Ken Kingdon** and I went to Lake Ontario Park to try to spot the new moon on April 14. We saw no moon but did enjoy a nice sunset, Venus, Mercury and a bit of idle Astronomy chat!★

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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:

walter2 (at) starlightccd (dot) com

or:

Walter MacDonald
PO Box 142
Winchester ON K0C 2K0

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Awestronomy

Hank Bartlett

THIS MORNING Ontario Hydro carried out a scheduled power outage including Newburgh from about 1–5 am. At 1:15 am a voice next to me muttered "Hydro did turn the power out," I had set my cell to wake me by 1:30 anyway so I got up, dressed and stepped out onto our front porch. Initially I was not struck by the darkness, but rather by the "light" all around me which was an eerie but familiar glow. As I looked for the source I saw only a few solar lights in nearby yards and a sky glow over Napanee and Kingston but this glow was all around me—it was closer or maybe not. I stepped into the street, turned east, looked up, and like a magic lantern I saw the source of the warm light that bathed Newburgh: there over the back of our house was Cygnus gliding along the Milky Way to our galactic centre!

At first I was dumbstruck by the millions of stars that I knew were around me—had it really been this long since I had observed a good DARK sky? How easy it is to take it all for granted as we walk our "safely" lit streets. If they are lit for safety why was I not afraid, why did I not feel vulnerable in the darkness? Rather than being outlined by the street lights I now blended into the nocturnal nature around me. Alone, oh yes I felt alone alright, as if I was one of few survivors in some post-apocalyptic society. Only an occasional vehicle passing along Main Street and the hum of a nearby dairy farm broke the stillness. I wanted to go knock on doors and say "Come out, look, you never get to see this anymore from your own street!" Wisely, I stood alone in the middle of the street turning, naming constellations to myself and thinking how lucky we are to be here in our little corner of the universe.

As any astronomical Jedi would do after a few minutes I reached into my pocket and pulled out my light sabre. Turning to the darkest area of sky (north, where this outage originated) I pressed the switch and a green beam of laser light shot into the sky for thousands of meters proclaiming "I AM HERE!" The brilliance of the beam told me the air was heavy with dew, little sparkles of moisture passed through it like stellar lightning bugs or stars coming to me to see who and what makes this light. If this was a sky full of dew what light would a dry air allow to pass to my eyes? I should remember I have seen it before, but why have I let it slip away from me?

After wondering the street for long enough to get cold and damp I forced myself to head back to the safety and warmth of our waterbed. As I lay there trying to go back to sleep all I cold see on my closed eyelids was that galactic glow which hangs over us all. I went to sleep feeling safer than ever and satisfied that whether we can see or communicate with them or not we surely cannot be alone in this universe it is far too beautiful to not be sharing it with others, even when you stand alone.

Thank you Di for waking me.★

Seniors' Centre Talk

April 23rd **Susan Gagnon**

After a couple of nights of serious PowerPoint cramming I delivered what seemed like an OK presentation to the Seniors' Centre. I focused on the variety of observing opportunities that Astronomy provides, some telescope basics, and what might be seen. They then went off on a bus to Queen's where Mel would give them a tour. They were very nice and seemed interested, had good questions. They were ready with the projector, helped me bring my props from the car, and I was set up in no time. I took a couple of telescopes and binoculars, books and chart handouts geared to binocular objects. They occupy the old Portsmouth Public School and they occupy all of it! It is a really busy place, with lots activities. They are actually looking for more space. The parking lot was full. When I was leaving it was suggested that perhaps we do it again next year. I have since heard that there was plenty of positive feedback and a suggestion for a future evening talk. There is a soccer field off to the north side with no lights, and I am curious to know what can be seen there. I may check this out another time. I quite enjoyed the event.★

The Milky Way in Cygnus

For Your Compendium of Esoteric Facts

Walter MacDonald

THE EARTH HAS A GREAT NUMBER of satellites in orbit around it. In the first few decades of the space age, satellites ranged in size from that of a soccer ball to a car. Did you know that with advances in technology, particularly the miniaturization of electronics, it has become possible to build very capable satellites/spacecraft of a very small size and weight? (Canada's MOST satellite comes to mind as a good example of this.) Writing in the Nov/Dec 2009 issue of *The Planetary Report*, **Louis Friedman** lists three generally accepted categories of satellites: microsat (10–100 kg), nanosat (1–10kg), and picosat (<1kg). He also adds a fourth category of his own making: the "atosat" which, incredibly, would have a mass in the range of 1–10 grams and perhaps even be used for interstellar flight! The mind boggles at the incredible advances in ideas and technology we are constantly witness to!★

Astronomical Anecdote: My First Star Party

Walter MacDonald

SATURDAY, JULY 12, 1980 is a day that looms large in my astronomical memory. It was barely a month after I took delivery of my C8 and the Toronto Centre's Observers' Group was holding its second annual Observing Workshop ("Og's Observing Workshop") at York University. The schedule called for a full afternoon of half-hour talks on various topics, geared to the astro novice. After a break for supper, participants were to be welcomed at an evening star party commencing at 8 p.m. and running until midnight. This star party was held at "Og's Bog" near Schomberg, home to the Toronto Centre's observatory (and later the North York Astronomical Association's). (*As an aside, this was just prior to the schism in the Toronto Centre that resulted in the formation of the NYAA and looking back it seems like this workshop was something of a forerunner to STARFEST which started just a couple of years later.*)

For a newly minted fanatical observer, this was a very exciting event! My friend **Scott Ramsay** and I attended with great enthusiasm. My dad dropped us off at York University (complete with my new C8), we paid our $2 registration fee, and settled in for the talks which we enjoyed immensely. The speakers were Toronto Centre members **John Morris**, **Andreas Gada**, **Carol Giangrande** (of CBC radio fame), **Evan Efston** (of Efstonscience fame), **Richard McWatters**, and **Kai Millyard**. The most memorable moment of the afternoon came during Evan Efston's talk "Care and Maintenance of Astronomical Equipment" when he demonstrated the use of a vacuum cleaner to remove dust from the inside of an Astroscan! At least the secondary mirror didn't come unglued!

Car pooling arrangements were being offered to maximize attendance at "the Bog," and so it was that one of the attendees (I wish I could remember his name) was kind enough to provide us (and my C8) with a ride to the star party. At the conclusion of the talks, we loaded up my C8 in his car and agreed to meet him back at the University after supper. The only place in reasonable walking distance was a local McDonald's, so we went there, ate, and then rushed back to our scheduled rendezvous. As I recall the car was a VW Rabbit, so with three of us plus two scopes (C8 and C5) it was pretty full!

The star party was absolutely amazing. The observing field at the Bog was littered with a multitude of orange-tubed telescopes: C90s, C5s, C8s, even a gargantuan C14! (Up until the mid-1980s when Meade started to gain traction in the marketplace, the SCT market was solidly dominated by Celestron). On this evening I had a chance to observe through many scopes in addition to my own, and received great help from my "chauffeur" in locating deep sky objects like M13, M57, and M51 in my own C8. It was great to be able to compare the performance of different scopes (particularly the C8 and its close relative, the C5) on the same objects; since I couldn't actually locate any deep sky objects on my own, having people around who could meant I saw a lot more in my own scope than I possibly could have otherwise. It was a huge thrill to see deep sky objects "live" for the first time (especially the legendary M51!), and to be observing amongst so many people of like interest. All too soon the star party was winding down, and my dad arrived to pick us up and take us back to Oshawa.

Over the course of that summer I spent many happy hours with my C8 and gradually learned how to locate many deep sky objects by myself. I went on to attend many more star parties (both urban and rural), yet even after 30 years of astronomical endeavour that first workshop/star party is still one of my most treasured lifetime memories.★

What was your first star party? Regulus *welcomes the thoughts and comments of its readership on this subject!*

Right: *Og was the Toronto Centre's Observers' Group mascot.*

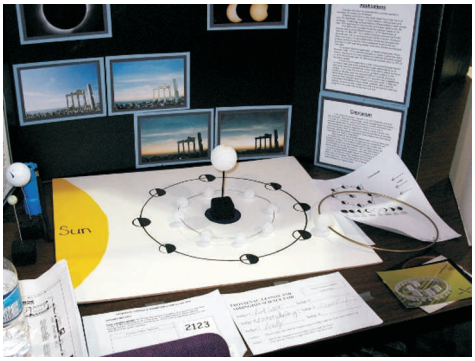
Near Astronomical Disaster Averted

Susan Gagnon

THIS WAS MY FIRST YEAR to attend the **KFLA Science Fair**. As a first time judge I was nervous. The task of being a fair judge is onerous, with a complicated form to be filled out not to mention the need to compare projects that were quite different. But I was a Special Judge. All I had to do was to scan the entries, find all of the Astronomy related projects and then select a winner from there. I was also lucky to have only one prize to award (thank you fellow exec.!). There was to be the best and no rating beyond that.

I found only 2 projects that would relate to Astronomy! There were plenty of entries, many related to green energy (titles with poo and poop were popular). The two for me to judge were 'Life on Mars' and 'Moon Shadow.' I chose Moon Shadow as our prize recipient. The eclipse display included plenty of research and some elegant little models that produced the shadows necessary to demonstrate the phenomena. The presenter, **Robin Pianosi**, demonstrated a good understanding of the subject. Robin

Robin Pianosi and her winning project, part of which is seen in close-up below.



is a calm and collected grade 8 student from Odessa Public School and I was very happy to see her receive the newly renamed **Leo Enright Memorial Award for Astronomy and Related Science**. The prize this year was $70 and a BOG.

Needless to say, my work was done early and I took the opportunity to speak to a few of the other students, explaining that I was not able to judge their entry but was curious. They were great kids and serious effort went into some of the projects. I returned in the afternoon to hand out the award at the closing ceremony.

I really enjoyed the experience, and if life permits, would be willing to do it again. However I am concerned that next year there may be no Astronomy (or related science) projects suitable for our prize. I can easily see my cake-walk performance this year turning into an awkward moment in the future. For now though, Miss Pianosi has saved the day, and Astronomy remained on the radar for one more year. ★

Starlight Cascade Observatory Renovations

Kevin Kell

FOR THE LAST SEVERAL MONTHS, we have noticed some motion in one or our two telescope piers in the observatory. This is never a good thing. The piers were built in the fall of 2002. First a nice hole was dug 4 feet down, then a custom made wooden pier made of 2"x4" wood was set inside the hole and a lot of concrete was poured around it, tamped down and let to set. The 2x4s were built with a hollow core, which we poured in sand to help damp vibrations. The floor was not in contact with the pier, also to help prevent pier vibration during walking around the observatory.

So, finally, we had some time in May to empty the place out pull out the carpeting and cut some floorboards to see what was going on. The floorboards were originally an open deck concept before the observatory building shell was added on top of it. In addition to the pier moving problem, some of the floorboards were warping twisting and causing an uneven floor.

Turns out the concrete had cracked big time. We were kind of expecting this, so in went a couple of tubes of liquid concrete patch filler, with the pier re-centered and made vertical with shims. The stuff takes 72 hours to cure so in the meantime we screwed down any floorboard not perfectly flat and started on the next phase.

It gets cold during the winter and our biggest issue was cold feet a lot of the time. So in went a layer of ½" pink rigid styrofoam followed by a

Starlight Cascade Observatory now has a warmer floor with ½"of styrofoam.

3/8" layer or plywood. It took some maneuvering to try and arrange the fewest number of cuts around the tables, the piers and other infrastructure. The various pieces were leveled when screwing down so now we have a warm-in-the-winter floor that is actually level. We put the carpet back down again, to help keep it warm and carpet also acts as a dropped-eyepiece protector. ★

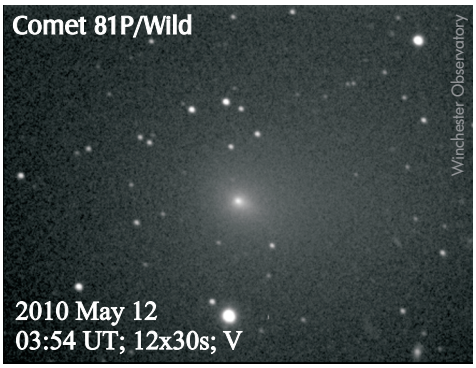
Observing Reports

Mon/Tue May 10/11

Walter MacDonald: I was about 25 minutes late starting tonight, so the run was just under 4½ hours—the nights are getting short! 153 variables were imaged tonight.

Wed/Thu May 12/13

Walter: I interrupted tonight's run to image Comet Wild; it is still hanging in there at 10th magnitude but is getting noticeably fainter. After resuming the run I went to bed. The run continued without incident until the computer had a fatal error of some kind and rebooted itself. This has happened a couple of times already this year. Oh well, that computer will be 7 years old this August so it may be due for replacement soon. 79 variables were imaged before the session (and the log file!) ended quite suddenly at 02:50:10.



NFB Films Online

Walter MacDonald

NFB Canada has a whole bunch of films that we can watch online, including some Astronomy ones:

The Universe (1960, 28:53)
nfb.ca/film/Universe
This film was shown at the Kingston Centre meeting of 1976 November 23 (has DDO footage!).

What on Earth (1966, 9:35)
nfb.ca/film/what_on_earth
This film was shown at the Kingston Centre meeting of 1974 February 26 and also at *Starfest* just a few years ago.

Auroral Rocket (1964, 14:03)
onf-nfb.gc.ca/eng/collection/film/?id=12497
(This is a listing only: this film doesn't seem to be available online.)
This film was shown at the Kingston Centre meeting of 1974 February 26.

Cosmic Zoom (1968, 8:00)
nfb.ca/film/cosmic_zoom

Satellites of the Sun (1974, 12:14)
nfb.ca/film/satellites_of_the_sun

The best thing about this is that no projector is required!★

More RASC Online

Walter MacDonald

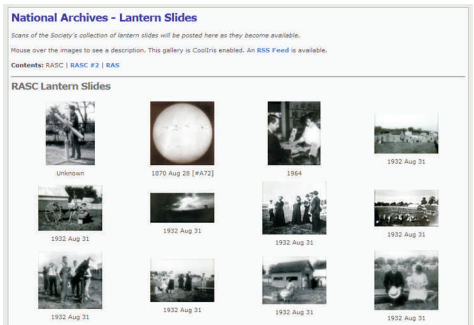
In an effort to "deepen" the RASC website, the following new content has been added in May:

Looking Up is now available as a single 27 MB PDF file (all 300 pages or so!) at:
rasc.ca/publications/lookingup/index.shtml

GA History: rasc.ca/ga/history.shtml
This page has been expanded with new photos, image maps, and documents, as well as tallies of how many names have been found so far for those in the group photos. The GA is now a 50-year tradition, so the history is piling up!

Past Solar Eclipses: A new Solar Eclipse History page has been created at:
rasc.ca/observing/solareclipses/history.shtml
for all you eclipse buffs out there.

Digital Archives: An effort is just underway to digitize much of the RASC's national archives, making it much more accessible to members and the public. No longer will you have to make the pilgrimage to national office in Toronto to access these materials! The results of this initiative to date can be seen at:
rasc.ca/archives/index.shtml
Materials are organized by decade and there is also a page for the Society's lantern slide collection. There is much, much more to come in this section of the website in the not-too-distant future!★



Part of the RASC's new digital archives.

More Public Outreach

Hank Bartlett

ADD ANOTHER ONE TO OUR RASC-KC scoreboard: I just did Venus/Solar/H-alpha with the Newburgh Public School grade 6 class. All went well and any clouds held off until we were done. No sunspots of course but there were some decent prominences. Venus was easy to find but was not as impressive as when it is a crescent—most thought it was a star or a moon, a few thought it was a geosat , only two guessed a planet. I left the last of my IYA planispheres and some other observing information for the teacher to hand out.

While waiting, one of my customers came along and had a look, I found out from her that she is **Bill Broderick**'s step-daughter; her husband is getting Bill's old Celestron. He will be building an observatory north of Newburgh on some nice flat wide open dark land. Bill is in good spirit but has had some rough times with chemo and the side-effects while being treated for prostate cancer. I asked her to remember us to him and to give our best wishes.★