Regulus

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

Coming up…

RASC Regular Meetings
Queen's University
Stirling Hall Theatre D

Friday May 12
Harold Kenny "Symbiotic Stars and the Nature of Radio Astronomy".

Friday June 9
Doug Welch "Amateur and Professional Optical Astronomy in the 21st Century"

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 May 13 9:00-10:30
Saturday Jun 10 9:00 - 10:30

AstroYak
Friday, May 26 7:00 pm
Friday, June 23 7:00 pm
at the home of Kevin Kell and Kim Hay, 76 Colebrooke Rd.

Members Observing
May 20-28 Lemoine Point
Jun 3-11 Lemoine Point

Congratulations

To
Sam Gregory and Alexandra Cudre-Mauroux, winners of the RASC Kingston Centre awards at the Regional Science fair. For more on the science fair, see page 2.

and to

Centre member Kevin Fetter on his 1Mb movie of the Russian space suit that was discarded from the ISS earlier this year and is still orbiting Earth. Kevin's movie has attracted media attention.
For more on Kevin's movie, see page 3.

May 6 is Astronomy Day

We will have a display and observing at the Isabel Turner Library Saturday, May 6 from 1:00 to 5:00 pm
also
There will be a talk & observing at Little Cataraqui Conservation Area the same day from 8:00-10:00 pm. There is an admission charge for attendance, free to participants.

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President's Tid Bits

Kim Hay

Spring has sprung. Some good weather some rainy weather , though we needed the rain, the skies so far have not been too bad. The ISS is back in the night sky, and many observers have been out trying to find Comet 73P/ Schwassmann-Wachmann 3 either in their own backyards, or at the members observing sessions at Lemoine Point coordinated by Ken Kingdon, our Observing Chair. This Comet apparently has broken into 3 pieces, and one of its piece's "B" has broken into two, which now hosts two nucleus.

We just had a great speaker at our last meeting, Kingston Centre member, Peter McMahon who spoke to us about a new book and project that he is doing. He is trying to locate the best places across Canada to camp and observe at the same time, and all by taking everything in a backpack. If you have any camping tidbits, pass them onto Peter.

May will be a busy time for the Kingston Centre, with Astronomy Day, May 6 and observing at Little Cataraqui at night, meetings, public observing sessions, and the General Assembly in the Nation's Capital on the long weekend, May 19-22, for more information visit **www.rasc.ca/ga2006**

Before you know it, summer star parties will be here, and we will be visiting far away places for dark skies and starlight. If your interested in what Star Parties there are in the RASC and surrounding areas, visit **http://www.telusplanet.net/public/fenertyb/sp_list.htm** or go to **www.rasc.ca/observing** and look under planning to observe.

Clear skies, plan your observing nights, dress warm.....oh the black flies and mosquitoes will be coming soon, so get some bug spray or netting clothing.

Till later.....keep looking up!

FLASF Science Fair

Doug Angle

Each year the Kingston Centre sponsors awards at the Frontenac Lennox and Addington Science Fair.

Awards for the best projects in astronomy and related sciences.

The first place award includes a certificate of achievement and one year youth membership in Royal Astronomical Society of Canada

First place was awarded to Sam Gregory from Calvin Park Public School for his project

Is it a good day in space?

Second place award includes includes a certificate of achievement and a copy of *The Beginner's Observing Guide.*

This prize was awarded to Alexandra Cudre-Mauroux from Sempar School For her project

Impact Craters

Congraulations to our award winners, and to all students who participated in the regional science fair.

Target For Tonight

Susan Gagnon

Target for tonight compiles object from various catalogues and observing lists by constellation. The purpose of this column is

- To help provide some structure to a beginning observers's session planning
- To provide a method of tracking objects observed in the context of some of the lists that have been compiled by experienced observers.

For a more complete explanation, see the Target for Tonight column in the February issue.

Target for Tonight: ***Monoceros***

Exploring The Universe:
variable star T Monocerotis

Messsier List:
M50

NGC Finest List:
NGC: 2237+ , 2261

Levy List:
159 (NGC2264), 160 (NGC 2254), 161 (NGC 2245), 162 (NGC 2252).

Suit Satellite

Doug Angle

From spaceweather.com:
REMEMBER SUITSAT? Three months ago, ISS astronauts hurled an old Russian spacesuit overboard. Amazingly, it is still orbiting Earth.

On April 18th, Kevin Fetter videotaped "SuitSat" passing over his home in Brockville, Ontario, Canada: 1 MB movie. (The bright star in the movie is Vega.) Eventually, SuitSat will sink into Earth's atmosphere and disintegrate in spectacular style--a fireball--but not yet!

To see Kevin's video, go to www.spaceweather.com and select "view archive" for April 28. A longer video of his earlier attempt to manually track it, is at http://www.kfetter.com/satvideo/041806/28933track.wmv (7Mb)

Kevin also reports that a British television company is going to use his video in one of their productions.

Way to go Kevin!

Collimating the Finder Telescope

Joe Benderavage

Here's how I did it. Considering that this "Orbitor" telescope might move when I adjusted any alignment screws, I focused upon Venus in Aquarius, using a 25mm eyepiece with the main telescope, then locked the Right Ascension and Declination lock knobs at RA: 22h 42m and Dec: -8 20 9. I made fine adjustments with Right Ascension and Declination control cables to keep the image centered within the 25mm eyepiece. Then in the viewfinder, I placed Venus as near to the crosshairs as possible by moderately loosening the finder telescope alignment screws, and then tightening them. I returned to the eyepiece.

By this time Venus had moved to the edge of the telescope image. So I centered the image again, and then speedily changed the eyepiece to a next larger magnification eyepiece which was 16 mm. Of course I centered this image, and then returned to the viewfinder and adjusted it in order to center the drifting Venus in accordance with the image in the new eyepiece. I hurriedly loosened one collimation screw and tightened its opposing screw until Venus was roughly within the crosshairs and then hastily returned to the eyepiece, corrected it again for drift with the flexible slow motion control cables, then quickly replaced the eyepiece with another of larger magnification, which was 9 mm. I centered the image, and promptly returned to the finder to make minute adjustments there with appropriate alignment screws; then I stopped.

Ivor Benderavage identifies two of four alignment screws for the finderscope of an "Orbitor" telescope.

Observations were made from a deck by the back yard. Transparency was hazy for naked eye viewing. Viewing was done with an "Orbitor" reflecting type telescope having an 11.4cm diameter mirror upon an equatorial mount. A full moon in Virgo was setting behind some trees toward the west-southwest. I could only guess at a star directly overhead at zenith as being Altair, the brightest in Aquila.

I hoped for clear skies so that I could test the collimation. When I finally did get to that, five days later, I found a somewhat imperfect correlation when I focused on Saturn. In the finder, when Saturn was on the crosshairs, it was not visible through the eyepiece. However, when I found the planet by scanning around with the main telescope, I could see it in the wider field of the finderscope, but off to the side of the crosshairs.

So, to have the same target visible in both 'scopes was some degree of accomplishment. And I did have a modicum of success when I observed the Big Dipper and imaged the sixth star, Mizar, in the viewfinder, and resolved it into two stars, Mizar and Alcor, in the main telescope.

KAON Observing

Kevin Kell

The next KAON (Kingston Astronomy Outreach Network) Public Observing session will be on the 2nd Saturday of the month as usual, Saturday, May 13th. We are on summer EDT hours with a starting time of 21:00 EDT. The new item of note is that we are reducing the session from 120 minutes to 90 minutes, ie starting at 21:00 and ending at 22:30.

KAON sessions are primarily aimed at educating the public but all members are welcome to attend as well, either as spectators or as event volunteers.

We usually need a minimum of 2 volunteers on the deck with scopes that are already onsite, and 1 greeter at the door to handout star charts. We have also been invited to provide a 16" telescope operator on occasion as well. If it is a particularly good night we will get over 100 members of the public and having a few more scopes on the deck would be an asset.

KAON sessions includes observing through telescopes on the deck, short talks in the warm room by various KAON personnel, poster displays, and observing with the Queen's 16" telescope.

Marshmallows on Venus: A show-and-tell of a wilderness astronomy quest
Peter McMahon

I've been fortunate in two ways that pertain to the Kingston Centre this spring: In the first place, I became a member (my wife and I recently moved from Toronto to clearer skies near Port Hope and I figured we'd get to Kingston more times a year than Belleville.) Second, I was lucky enough to be able to share the initial research I've done on a project with some Kingston Centre members at a recent meeting - research into a topic that I hope will become a popular sub-section of amateur astronomy.

Three years ago, my girlfriend and I (now my wife) were camping in a provincial park I've enjoyed for most of my childhood. We paddled inward a few lakes to enjoy the beautiful fall colours, the lonely cry of the loon, and the crisp clear view of the night sky.

But something was different this time. I felt that evening like I had to strain more than usual to see a distant galaxy I spotted when I was 12, and the river of the Milky Way wasn't quite as wide.

It could have been that my eyesight was just a few years past its peak, or that a slight haze obscured our view that night. But there was another possibility - one I hoped was wrong: The night sky from the park was actually less visible than it was only a few years before.

One of the most impressive sights is the Milky Way from a truly dark location. But many school children have never seen it.

Though I fear that our views of the night sky and our knowledge of the constellations might be on the wane, even in the wilderness, I know that our chances of experiencing such things anywhere near a city are dwindling each year.

More and more school children I talk to at summer camps and museum star nights tell me they've never seen the Milky Way - having lived in urban areas all their lives - and constellations that used to sport dozens of stars from the outskirts of my hometown of 70,000 now only reveal seven or eight points of light.

That night, amongst the fresh air and pine scent of the wilderness, I wondered if there were places in Canada where we could find the stars of years gone by.

The search begins

To answer that question, I've set out to find the best spots in Canada from which to experience the night sky.

"Best" is a pretty broad term, but what I'm looking to drop into that category are places that offer the ultimate combination of dark skies and cultural significance: Essentially, astronomy "destinations".

As it turns out, many of the places I've found so far are in parks and conservation areas accessible to the general public. And many of these places boast hidden treasures that are as much a celebration of the land as the sky above.

The crescent moon with a hint of earthshine pokes through the branches.

Though amateur astronomers might know about the Torrance Barrens "dark sky preserve" in Ontario, you might not know about another one under consideration in Ontario's cottage country. Kawartha Highlands Park - not quite a provincial park and more than just a large chunk of Crown land - boasts some of the darkest skies you're

Venus setting over the Three Sisters mountain in Alberta.

ever likely to see so close to major urban centres. What's more, the park is minutes from Petroglyphs Provincial Park, which boasts the largest concentration of native rock carvings (at least 900) in Canada, some of which have astronomical origins. Local native guides even surmise that one of the carvings is a likeness of the Little Dipper.

The Cypress Hills region of Saskatchewan is another area of the country known for its pristine skies and wide-open observing locations. But even further North, there's a hidden observing gem nestled in the middle of a piece of history. Two summers ago, I was in Prince Albert National Park and had just come back from a hike to the cabin of Grey Owl, the naturalist and beaver conversationalist who made the area famous. Later that night, on the shores of nearby Kingsmere Lake, I saw just why it was worth putting some distance between myself and even the dimmest cottage

porch lights. In addition to the clearest sky I've seen anywhere, I was treated to a view of Castor (from which the word "beaver" is derived) one of the twin stars in the constellation Gemini. I wondered if Grey Owl ever considered the patterns he saw in the night sky here above his cabin and the tangential connection one of them had to his life's work.

An outdoor enthusiast's sky guide

As I've traveled into other parts of Canada, I've started to - and am looking to - meet people who've told me stories about the stars above Banff and Temagami, the Maritimes and the Rockies, written generations ago - not by the ancient Greeks or Romans - but by ancient Canadians.

I'm in the midst of gathering together tales and locales from my own travels and from the people who've learned of these stories and places firsthand, along with hints, tips, maps, and fun moments from the portage. I'm hoping to assemble it all into a guide to enjoying these exciting stargazing destinations - one of our country's greatest natural resources. If all goes well, I suspect they'll become an important part of our wilderness heritage and - I hope - a new reason for Canadians to enjoy our precious wild spaces.

If you have a wilderness observing location tip for Peter or would like to learn more about the locations he's cataloguing, log on to www.northstarproductions.ca

Peter McMahon is an award-winning online science journalist. He is currently a producer for DiscoveryChannel.ca and editor of Science Link, the journal of the Canadian Science Writers' Association. His wilderness stargazing research journals are slated to appear later this year on www.science.ca. Peter spoke about wilderness astroThe Kingston Centre of the RASC

Volunteers needed Fall ‘n Stars

Arlyne Gillespie

Fall ‘n Stars is the annual star party we host jointy with the Belleville Centre. If you would like to join this year's committee to help organize Fall n Stars, please contact any member of the executive, or email Arlyne at amgillespie@sympatico.ca So far the committee consists of Joe Shields, Greg Lisk and Robert Mindenhall from the Belleville Centre with Arlyne as chair.

We are looking for new energy and new ideas!!!

Observing Report

Jan Wisniewski

Sunday, March 26 was clear, though the sky near Hawkesbury had quite a bit of haze and wind was nasty at times. Eventually I have hid very close to the stable (a.k.a. "wind barrier") and was able to continue observing until dawn. I have actually watched Virgo galaxies as well and after picking through less populated areas decided to try "sky-sailing" technique (I have made up the name but technique is not new - Herschels used it quite a while ago, of course). Basically, I point a scope at some galaxy on the east edge of a cluster and just wait for other objects to parade in front of my eye one by one. And in my 20 inch there is almost no empty field of view at any time, especially with 22 mm or 31 mm Nagler... Then I will go again to E edge, offset about FOV south and contemplate galaxies in the adjacent row... Quite relaxing

compared to trying to star hop there.

Monday night was even better and I pulled another all-nighter. Started with northern part of Puppis, through south part of Hydra (Hydra I cluster, though suffering from haze at low altitude, showed all NGCs and many PGC galaxies) I eventually got back to Virgo again and spend lots of time there. The southern part gets less populated, though, so I had to switch back to galaxy-hopping.

As I mentioned, I am trying to see all objects listed in The Night Sky Observer's Guide but all the time I notice a few extra targets nearby so list expands. So far I got about 3100 objects and still have about 700 to go (with extras it will probably be about 1000 by the time I finish). As this night may be good as well, I should get a bit closer to the completion of that project...

Among my recent targets was Twin Quasar with at 17 mag. a few arcsec. apart tested aperture and, especially, seeing conditions here. NGC 3079 and two galaxies nearby create a spectacular view though. Most amazing was NGC 3718 - large, ghostly, twisted spindle - and Hickson 56 compact group of five UGC/PGC galaxies just to the south. At 15-16 mag. each, that tight knot is bright enough to be seen in smaller apertures I guess.

Those are overhead in UMa, of course. I have however also beat my record so far for lowest declination objects. There is a forest along my southern horizon by I managed to pick up a few large, loose clusters in Puppis at declination -38 deg. to - 38.75 deg. Once the field dries, by dragging the scope to far N end I may gain a couple of degrees over it. Than a few additional objects in Centaurus, Lupus and Scorpius will accessible.

Anyway, I wanted to update you on observing in Far East Ontario and add a few objects to your challenge list.

Clear skies (there is always time to sleep during Full Moon...),

Beaver Hills Dark Sky Preserve

From the RASC National Office

At its monthly meeting April 10, the Royal Astronomical Society of Canada's Edmonton Centre hosted a special guest with an extra-special announcement. Marilyn K. Peckett, Superintendent of Elk Island National Park, advised about 80 Centre members that the Beaver Hills Dark Sky preserve is soon to become a reality.

A partnership among Parks Canada, Alberta Parks and Protected Areas, and the Royal Astronomical Society of Canada, Beaver Hills DSP will be officially declared this upcoming September at Elk Island's "Celebration of the Century", marking the hundredth anniversary of Canada's first game preserve and still Canada's only fenced national park. More details about the public celebration of the declaration will be released as arrangements are finalized, but it is certain to include significant astronomical programming supported by RASC volunteers.

In addition to the entirety of Elk Island Park, which contains about 194 square kilometres, Beaver Hills DSP will encompass a larger area including sections of provincial protected areas Blackfoot Reserve and Cooking Lake Moraine

for a total protected area of some 300 square km.

RASC Edmonton Centre members have conducted dark-sky observing sessions at Blackfoot for over 20 years and at Elk Island prior to that, so the formal recognition and protection of this area's dark skies is a cause for celebration among local astronomers.

Under the theme "Many Cultures, One Sky", the Beaver Hills DSP will raise public awareness in light pollution abatement, and support astronomical, environmental, and cultural interests. Scientific research of wildlife in a truly natural environment devoid of artificial lighting is also planned. Public astronomy programming in the parks, begun on a trial basis in 2005 by parks personnel using scopes, materials, and training provided by RASC, will be expanded.

This initiative has been two years in the making. Led by Sherrilyn Jahrig, John Cliff, and Warren Finlay, over a dozen members of Edmonton Centre have contributed towards this effort. We have benefited from timely assistance of members of RASC's National Light Pollution and Abatement Committee and employees of Telus World of Science – Edmonton. Parks personnel, both national and provincial, have been universally helpful, sharing many common objectives with astronomers with respect to protection of the natural environment. We have made numerous additional useful contacts which may eventually result in future additional or expanded protected areas and the skies above them. We are delighted to have done our part to help make Beaver Hills DSP Canada's newest Dark Sky Preserve.

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	**Deadline**
June	May 27
July	June 24
August	July 29
September	August 19
October	September 30
November	October 21
December	November 25
January 2007	December 16

Subscriptions: Members of the Kingston Centre receive Regulus as a benefit of membership. Advertisements are free to members of the Centre. Commercial advertising is $20/quarter, $40/half page, $100/ full page and should be in electronic format. Contributions are more than welcome. Submitted material may be edited for brevity or clarity.

Kingston Cosmic &Events Calendar
May and June 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

May 1-7	Marks International Astronomy Week
May 5 Friday	First Quarter Moon 1:13
May 5 Friday	N-aquarid meteor peak at 0:00 am
May 6 Saturday	Astronomy Day at the Isabel Turner Library
May 6 Saturday	Astronomy Day Night Observing at Little Cataraqui Conservation Area. There will be a talk & Observing
May 10 Wednesday	Spica 0.4 NW of Moon. Best in E. Of N. America 8:00 pm
May 12 Friday	Regular Meeting, Stirling Hall Theatre D 7:30 p.m. Guest speaker: Harold Kenny (RMC) "Symbiotic Stars and the Nature of Radio Astronomy"
May 13 Saturday	Full Moon 2:51
May 13 Saturday	KAON Observing Session - Ellis Hall Queen's Observatory 9:00-10:30
May 19-22	RASC General Assembly in Ottawa see www.rasc.ca/ga2006 for details
May 20 Sunday	Last Quarter Moon 5:20
May 26 friday	Astro Yak at the home of Kevin Kell & Kim Hay
May 27 Sunday	New Moon 1:26
May 30 Tuesday	Crescent moon between Mars and Pollux 11 pm
May 31 Wednesday	Crescent moon 2.6 degrees above Saturn and the Beehive cluster (M44) best in NE of N. America at 9:00 pm

MAY Members Observing Session: first clear night Saturday, May 20 to Sunday, May 28. Meet 9pm in the South Parking Lot of Lemoine Point C.A.	
June 2 Friday	Relay for Life at RMC- help promote Astronomy to those who are walking for Cancer.
June 3 Saturday	First Quarter Moon 19:06
JUNE Members Observing Session: first clear night Saturday, June 3 to Sunday, June 11 Meet: 9pm in the South Parking Lot of Lemoine Point C.A.	
June 9 Friday	Regular Meeting Stirling Hall Theatre D 7:30 p.m. Guest Speaker: Doug Welch "Revolutions: Amateur and Professional Optical Astronomy in the 21st Century"
June 10 Saturday	KAON Observing Session- Ellis Hall Queen's Observatory * 9:00 10:30 p.m.* see http:// members.kingston.net/rasc/ pubobs.htm
June 11 Sunday	Full Moon 14:03
June 16 Friday	Pluto at opposition
June 18 Sunday	Last Quarter Moon 10:08
June 20 Tuesday	Mercury at greatest Elongation E(25 degrees)
June 21 Wednesday	Summer Solstice 8:26 am
June 23 Friday	Astro Yak at the home of Kevin Kell & Kim Hay visit http:// members.kingston/~rasc/ indexsec.htm for directions
June 25 Sunday	New Moon 12:05