# HORIZON

LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA
New Brunswick Centre
THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

Mar/Apr 2012
Vol.13 Issue 2

## IN THIS ISSUE

# EVENT HORIZON
## Astronomy in New Brunswick

### SRAC/RASC Centre du NB Centre
### Réunion / Meetings

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## March Astronomy Meeting

**When: March 24, 2012 1:00pm**

**Where: U de M, Moncton**
**Engineering Bldg**
**Room G148, G2**
**1pm-4pm**
**Watch your email for notice!**

## April Astronomy Meeting
## (No Meeting)
## Public Outreach Event

The Amazatorium

The Amazatorium is an interactive fun fair at which they expect approx. 4000 kids & parents.

**When: April 21, 2012 10:00-1:30 and 2:30-6:00**

**Where: Harbour Station**
**Saint John**
**Watch your email for notice!**

**If you can give some time to help our display please contact June MacDonald.**

**junie@nbnet.nb.ca**

### RASC NB Local Unit
### Réunion / Meetings

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## William Brydone-Jack Unit
## (Fredericton)

A local group of members meet in Fredericton monthly for meetings and observing.

**When: March 13, 2012 at 7:00pm**
**April 10, 2012 at 7:00pm**

**Where: Fredericton, UNB Campus**
**2 Bailey Drive, Room 203**

***www.frederictonastronomy.ca***

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## Saint John Astronomy Club

Meetings consist of talks on constellations, the solar system and other astronomical topics, as well as Show & Tell, observing reports and Ask the Astronomer.

**When: April 14, 2010 at 7:00pm**

**Monthly astronomy meeting will take place at Rockwood Park Interpretation Centre.**

## Inside this issue :



## Cover Photo/Sketch By John Karlsson

This is a sketch using pastel chalks ,white charcoal pencil and a wight gel pen on black pastel paper. I did this sketch in the cold late night of last summer. The sky's where very clear and the temperature had dropped to 2Deg C. Cold considering it was +30 that afternoon. The pastel is brushed onto the paper and then smudged in with a blending stump. Darker areas are added with a kneed able eraser. Stars are done with the gel pen as well as the white charcoal pencil.

This is a really neat nebula to see with a large instrument from a dark location using some decent equipment.I made the sketch the next day from the field sketch that I did at the eyepiece.

## PRESIDENT'S REPORT
### by Curt Nason

In early February we found ourselves with two vacancies on our Council. As per our Centre constitution, replacements may be elected by a majority vote by Council so a request was sent seeking members who were interested in the position of Councillor. Two people stepped up, which made the selection process easy, and I welcome and thank our new Councillors, James Ayles and Roger Pitre. Emma MacPhee has moved from Councillor to 2nd VP, and Marc Arsenault is now 1st VP. In addition, James Ayles is our new National Representative with Paul Gray as his alternate, and Emma and June MacDonald are co-Chairs of our recently formed Star Party Committee.

A big thank you to Adrien Bordage for donating a pile of astronomy books to the Centre library. Ted Dunphy is our librarian and an inventory of our books and DVDs is maintained on the Centre Web site. If you want to borrow a book, just click on Request Check Out beside the item and Ted will bring it to the next meeting for you to pick up. It will take a while before the Web site is updated with the new additions, but there is already a great selection of reading and viewing material .

Thank you to the following who have recently renewed their RASC membership: James Ayles, Ted Dunphy, Paul Gray, Malcolm Jardine (who truly can be excused for not travelling to our meetings), Don MacPhail and Eldon Rogers.

As I write this there is still a week left in February, and already this year our Centre members have reported nine outreach events to the National Web site. These include (date, number of participants, event):

- Jan. 17, 30 Cubs in Westfield
- Feb. 2, 20 Guides in Rothesay
- Feb. 4, 65 moonlight snowshoers at Irving Nature Park, Saint John
- Feb.7, 27 Guides in New Maryland
- Feb. 7, 16 Beavers on a field trip to William Brydone Jack Observatory
- Feb. 8, 13 Cubs in Cambridge Narrows
- Feb. 16, 35 Grade 6 students at Millidgeville North Middle School
- Feb. 19, 11 Young Naturalists and parents in Norton
- Feb. 21, 54 Grade 6 students at Bayside Middle School, Saint John

Many thanks to those who have taken the time to share their love of astronomy with fellow New Brunswickers. I encourage all members to participate in at least one outreach event this year by giving presentations or sharing the view in your telescope. Power Point presentations are available for Cubs, Guides and Beavers, and also for solar system and constellation talks, and we have a good supply of Star Finders and the new Moon Gazer's Guide for handouts. Please report your outreach events via the RASC Web site, including the number of Star Finders and Moon Gazer's Guides you gave out. This allows us to get more when supplies run low. Also, when your file a report you will get a confirmation email. Please forward the confirmation to June MacDonald and to me so that we can include these in Centre reports.

In January, our Centre Council adopted a policy to allow for reimbursement of gas expenses for outreach events. Here is the policy. Reimbursement Policy for Outreach Travel Expenses:

a) RASC NB members may be reimbursed, at their request, for gas expenses when travelling > 100 kilometres (return) within New Brunswick for the purpose of participating in a public outreach event related to astronomy.

b) Travel reimbursement for outreach events outside the province shall require prior approval of Council.

Cont. on page 8...

## Focus On Thomas Buckingham

1. When and how did you get started in astronomy?

A cousin of mine loaned a small telescope to me when I was in elementary school and that is my earliest recollection of my interest in astronomy. From that simple act, I explored the skies, obtained and read books on the subject, shared with friends, etc. I continued this interest throughout my childhood right up until I was married and children arrived. Then, I had zero time for about 10-15 years. But, my interest was rekindled and I started back into the hobby which included joining the RASC and purchasing a new telescope working my way to my dream telescope. P.S. Once my cousin was married and had kids, I gave him back the small telescope so he could share it with his kids.

2. What part of the hobby appeals to you the most?

I don't think I have a particular favourite part of the hobby. However, I would say that the continued variety of events and opportunities that exist today is definitely a positive for the hobby. It's in the news more often; there are great web sites now available; astrophotography has exploded in recent years and that has added so much to the hobby and captured the imagination of many folks who wouldn't otherwise be interested in looking at black and white dots in the sky.

3. What made you decide to join the RASC?

After my kids were older, I got reconnected with the hobby and wanted to make a bigger commitment to it so joining the RASC was a logical option. Besides the many product offerings, I had hoped to connect with local folks with similar interests. Unfortunately, that never really happened due to my many commitments I have with work, family, volunteer efforts, etc.

4. Recognizing that some people just don't like meetings, what can we do to increase attendance at our monthly meetings?

Tough question for me as I never attended meetings. One thought might be to make "meetings" more like a gathering. Frequent gatherings could involve education sessions (how to's, product evaluations, best practices, etc.) and viewing sessions combined. Maybe taking these gatherings on the road and holding them in community centers or schools may generate more public interest as well. e.g. a portion of the gathering would be members only and then it could be open to the public.

5. You recently made a generous donation of equipment to a high school astronomy club. Tell us about the club and how you hope the donation will help them.

The club is the Leo Hayes High School Astronomy Club under the direction of Mr. David Hall, a teacher at the school. My primary goal was to allow students who had an interest in astronomy to experience it with good equipment in hopes that it may help spark an interest in pursing a career in this field or the many related fields. As a bonus, Mr. Hall was going to leverage the equipment for use by the school's photography club if they had an interest in exploring astrophotography. Putting it another way, I simply wanted a good home for my equipment where I knew it would be well cared for and well used. If it helps generate an interest in astronomy or science in general, then I've achieved my goal.

6. What can our Centre do to help this and other school astronomy clubs?

Most school astronomy clubs have limited funding and are typically run by

teachers or volunteers. It would be my hope that by connecting these clubs with RASC-NB that there could be some collaborative efforts that I believe would be a win-win for both parties. It doesn't have to be about money. By simply working with these clubs, students would get a chance to learn from the many experienced members in our Centre as well as have better viewing opportunities. The Centre would benefit in being able to share the hobby with more folks (outreach) and generate more interest in astronomy with our youth. The simple act of providing volunteers from the Centre to help these schools with viewing and education sessions would be significant given that I suspect most club leaders have limited time to organize events.

## Clear Sky Chart Project
### By Chris Weadick

The RASC-NB Exec voted at the previous meeting to help support the Clear Sky Charts ("CSC") operated by Atilla Danko. The Clear Sky Charts continue to be the "go to resource" as a graphical indicator of what the night sky has ahead for us for the up coming 48 hours. Atilla's charts - just shy of 4300 locations - is used by almost every astronomer and observatory for their websites.

All chart owners are encouraged to sponsor their charts in order to support the costs of the servers, internet access, and tools used to help create and supply the charts for the data provided by The Weather Office of Environment Canada. It was proposed by Council and accepted by unamous vote for the NB Centre to have a presence on the chart's sponsor page for the NB Centre to have a recognition as a sponsor (associated the chart with the Moncton location as Moncton was the original home for RASC-NB).

On the CSC website, the support for a chart is usually referenced as SponsorSHIP, this article is titled "PartnerSHIP" because the NB Exec has negotiated with Attila for The RASC-NB to have a significantly reduced rate for our Centre to post our presence on the web for 2012. We appreciate Attilla's ongoing support which in the last few months includes new charts for the Dark Sky Preserves (DSP - Fundy National Park, Kouchibouguac National Park, Mount Carleton), Urban Sky Park (Irving Nature Park in Saint John is the first and only one in Canada), and the home of the COW - Mactaquac. All the charts (Except Mount Carleton - updated to refect the status of DSP) for the before mentioned parks are all new in the last few months including the COW as it was recognized as a great location for fellowSHIP of our Centre in the summer months and outreach to the public. Atilla usually has strict rules regarding placement of clocks but with the great relationship he has with RASC-NB members some of those restrictions (proximetry of charts to other charts usually 24km/15miles from an existing chart).

We attempted to create a bilingual "logo" (not implied to replace our current logo or branding initiatives) for the chart given limited space (each logo is 200x50 pixels "dots") it left our existing crests "out of the running" as they would not be legable. The bilingual representation is an important consideration and the Executive invites our tallented members to propose new Clear Sky Chart "logos" that best reflect our Centre having members in both official languages. Please forward any designs to Chris.Weadick@gmail.com

We hope we are supporting our members and outreach to the astronomy community with this little bit of recognition to Atilla, to our Centre showing we support astronomical ventures, and continue to grow the benchmark reputation we have within The Royal Astronomical Society of Canada. If any member has additional project ideas or would like to participate on projects we welcome proposals to review at future business meetings and

feel free to contact any of the current Executive or Council. We need your help to ensure we meet the needs of the membership and to promote our hobby to the public.

Centre/Moncton sky chart with CSC logo
http://cleardarksky.com/c/Monctonkey.html?1

Sponsor's page including RASC-NB CSC logo
http://cleardarksky.com/csk/sponsors.html

Thank-you to our members for all the volunteer work and efforts we have contributed to enable sharing of our hobby and the night sky to the public, be it with schools, Scouts, Guides, sidewalk astronomy, or just in our backyards with neighbours and friends...

Thank-you to Attila Danko for providing the service to all astronomers and for special sponsorSHIP of the RASC-NB logo.

Thank-you to the members who assisted with the project.

Thank-you to the Executive and Council for supporting this initiative.

## Feburary Meeting Report
**by June MacDonald**

Curt welcomed everyone & reviewed the agenda. He went through the list of new & renewed members. Curt gave a "What's Up" for February/early March. He mentioned the full Moon on Mar. 8 is called the "Full Worm Moon"; the new Moon is on Mar. 8 – a good time to attempt the Messier Marathon. He reminded people to watch fro Lindbergh's Thrush 4-5 days after the new Moon. Brian McCullough made a PPt. presentation on this object, based on Curt's observations. So who's famous then? Curt will be giving out autographs at the next meeting – for a nominal fee. Venus will be within 3 degrees of Jupiter Mar. 12-15. Mars will the closest it will come for the next few years on Mar. 5. Jupiter & Venus are both prominent in the evening sky. Saturn is coming up in the late evening sky as well & its rings are opened to about 15 degrees. We won't see Neptune or Uranus until the early Spring as they pass behind the Sun. Asteroid 433 Eros, an NEA discovered in 1898, is moving into Sextans & is the closest its been since 1975 & is mag 8.8. Mar. 31 is Earth Hour.

June gave a talk on Dr. Jocelyn Bell -Burnell, an astrophysicist whose presentation she, Emma & Curt heard when she gave the Josiah Wood lecture at Mt. Allison Jan. 23. It was extremely interesting. Dr. Burnell was the discoverer of pulsars in 1967 & 1968. Her thesis supervisor whose name was the first listed on the paper, was awarded the Nobel Prize in Physics in 1974 for the discovery, while she was side-lined. However, she has gone on to win many other awards, medals & recognitions since, including President of RAS in England & holds no grudge – a gracious lady.

She explained the whole process of her discovery. She told the audience she had to do the analysis manually, as computers were few & far between at that time. She added that if there had been computers, she would not have made the discovery, as not knowing about the existence of pulsars & not expecting them, the computer would not have been programmed to look for that signal.

She went on to speak about women in Astronomy & how they are outnumbered by men in the field & why. Developed countries, especially English speaking ones had a lower percentage of women compared to men in astronomy, while countries many people consider as lagging behind in the scientific community have a

greater number. The world average is 15%, Argentina has 37%, while Canada & the U.S. have only 12%. The issue is culture, not lack of brains in women. She encouraged women entering the field to be persevere, take risks, aim high & keep your options open. She gave a quote "Well behaved women rarely make history" (Laurel Thatcher Ulrich).

She also said a scientists ethics are: be honest, be just-treat other scientists fairly, be open to new ideas & share your own ideas. She is also interested in poetry, stories & art with an astronomy-related theme. She mentioned she has found 150 writings from over the last 50-60 years. She herself co-authored a book of poetry called "Dark Matter – Poems of Space". She also mentioned that with dark energy & the rapid expansion of the Universe, eventually everything will be so extremely stretched apart, the sky will become dark, stars will go out, galaxies will disappear & life will no longer be possible. We have to revise our theology. She is a Quaker & said their belief is that we are always evolving, changing which matches well with research science. They believe you develop your own idea of God through your own life experiences. So when she thinks of the Universe ending, for her it is just another evolution – developing & redeveloping.

She has been asked many, many questions about Doomsday 2012 every time she gives a talk. She has developed several presentations on debunking this scenario. A couple of the website links are:
-http://www.youtube.com/watch?v=MUij0m6RbIQ
-http://www.youtube.com/watch?v=kSDdP57YY7Q&feature=relmfu
-http://www.youtube.com/watch?v=VZEZgTzQyW4&feature=relmfu
-http://royalsociety.org/events/2011/end-world/

She has discovered that you can still do well even though you don't win a Nobel Prize. Once you win that, there's no where else to go, who's going to give you an award now? Instead she has won an numerous awards & honours each with a dinner. So for her "it's a been a party every year".

Observing reports: Don, Roger & Curt shared their observations of the Moon, Jupiter next door to the Moon & Curt participated in a public observing session at the Irving Nature Park, at which 65 people attended. Ted told us about Hind's Star, which is blood-red.

Show & Tell: there were many of Adrien's old magazines & books he made available for anyone interested; June showed the "Tactile Universe" she received from NASA. It is certain space objects (Neptune, Butterfly Nebula, an asteroid, etc. which are set on a special type of paper with a special type of medium (ink?) that raises the objects surface so that visually challenged people may actually feel what these space objects feel like. Very good for public display & for schools for the visually impaired.

Paul showed astro images of Venus & the Moon with a halo around both & a church spire in the foreground. Roger showed his Orion Nebula, Horsehead, NGC 2024, M35. Wonderful photos guys. Keep them coming.

Emma gave a presentation on Venus & Venus Transits. She told us about Venus physical characteristics- its surface the hottest in the Solar System due to the CO2 in the atmosphere, its mass is 90 times that of Earth's, although somewhat smaller is diameter. Clouds of sulfuric acid & rain smother the planet which is 108.2 million km. from the Sun. It rotates from East to West & its day is 224.7 Earth days. Venus' orbit has a different angle compared to that of Earths. Venus "transits' when it

crosses in front of the disk of the Sun. There were transits on Nov. 24, 1639 & also in 1879, witnessed by James Cook during his travels in the South Pacific.

This year's transit will take place on June 5 in North America & we will see Venus transit the top half of the Sun's disk.

Curt gave a talk on Mars. Mars is 1.38 – 1.67AU from the Sun, making it 50% farther away from the Sun than Earth & its size is 0.53% of the Earth's diameter, while being nearly 9 times more massive than the Moon & twice its diameter. One Martian day is equal to 24 hr. & 39 min., its year equals 687 days & its day is called a sol.

He showed a few posters of famous movies about Mars – "Mars Needs Women" & Curt's own favorite "Santa Claus Goes to Mars". We never knew there were so many & Curt has them all!

He showed us the "happy face crater" on the Lunar surface & the canyon Valles Marineris which is 1000 ft. long & as deep as 5.7 km below the mean surface area. Olympus Mons is the highest mountain in the Solar System, 3 times higher than Mt. Everest at 26 km. high & 600 km across at the base. Mars has 2 moons – Phobos at 25km in diameter & Demos at 15 km wide. The dark marking you see are from basalt from volcanic flows; rust gives the surface its red colour. Iron in basalt rusts, erodes & blows as dust. It looks more yellow in a telescope. There are many photos of the huge dust storm that occurred there in 2001.

It was another great meeting & afterward, we trailed down to Lily's Café for supper. Can't wait until the next meeting – hope to see you there!

Cont. from page 3

c) The reimbursement cost per kilometre of travel shall be 10% of the gas pump price per litre.

d) The Council shall be notified of the request by email.

e) The member making the request shall record the outreach event through the RASC National Web page.

f) Reimbursement will be made at the next meeting.

g) This policy does not apply to travel to star parties.

h) This policy shall reimburse to a maximum of $500.00 for the Centre in a business year.

Mars at a its best in 2012!

This photo of Mars is by Halifax Centre member Stephen Punshon. Details are below as he reported to the Halifax Email List.

The seeing was much better last night but Mars was still in the tree
branches when I grabbed this shot before the clouds rolled in.
4 inch refractor, 5x powermate and Toucam pro. 460 frames stacked and processed in Avistack 2.

## OBSERVERS' SCORECARD

| | Explore the Universe | Messier | Finest NGC | I. William-son Lunar | Deep Sky Challenge | Dark Nebulae | Herschel 400 | Levy Deep Sky Gems | Caldwell | Arp Galaxies | Abell Galaxy Clusters | Hickson |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gerry Allian | 101 | 93 | | | | | | | | | | |
| James Ayles | 37 | | | | | | | | | | | |
| Adrien Bordage | 100 | | | | | | | | | | | |
| Bob Crossman | | 110 | 28 | | | | | | | | | |
| Charles Doucete | 110 | 110 | 110 | | | | 65 | | | | | |
| Ted Dunphy | 102 | 110 | 110 | 51 | 10 | 8 | 265 | | | | | |
| Colette Fortier | 87 | 28 | | | | | | | | | | |
| Paul Gray | 97 | 110 | 110 | 46 | 31 | 20 | 238 | | | | | |
| Peter Jensen | 12 | 73 | | | | | | | | | | |
| Don Kelly | 110 | 110 | | | | | | | | | | |
| Mark Laflamme | 106 | 30 | 2 | | | | | | | | | |
| Danny LeBlanc | | 110 | 110 | | | | 127 | | 8 | 21 | 21 | 9 |
| Emma MacPhee | 78 | 110 | 110 | 5 | | | | | | | | |
| Curt Nason | | 110 | 110 | | | | | | | | | |
| Mike Powell | 70 | | | | | | | | | | | |
| Detlef Rudolph | 62 | | | | | | | | | | | |
| Chris Weadick | 71 | 26 | | | | | | | | | | |

This section is intended to inspire our members to get out observing by promoting a friendly competition. The left column includes our members who have reported their successes to the scorekeeper, Paul Gray. To be included please contact Paul Gray at: editor@nb.rasc.ca