

NOVA

NEWSLETTER OF THE VANCOUVER CENTRE RASC | VOLUME 2011 ISSUE 1 | JANUARY/FEBRUARY 2011

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Looking Ahead

Remember, you are always welcome to attend meetings of Council, held on the first Thursday of every month at 7:30pm in the Ray Whittick Lounge.

Jan. 13: Dr. John Mather of the Goddard Space Flight Center: From the Big Bang to the Nobel Prize and on to James Webb Space Telescope and the discovery of alien life.

Feb. 10: Richard Berry: The Herschels and Lord Rosse, a pictorial discussion of two pioneering astronomer/telescope builders.

Next Issue Deadline

Material for the March Nova should be submitted by Monday, Feb. 28, 2011. Please send submissions to:

novaeditor.rascvancouver@gmail.com

Title image: Jason Rickerby

Sidewalk Astronomy in Maple Ridge

by Leigh Cummings

I spent the first Sunday of the year doing some sidewalk astronomy. It was a great day/night for doing it. The weather co-operated as well as the Sun and Jupiter and Uranus.

I set up in front of the Save-On-Foods at the Valley Fair Mall here in Maple Ridge. I set up my EQ3 mount and put RASC's solar telescope on it. I was up and running by 2pm. The sun had some very nice prominences placed all around its perimeter and a very dark (if small) sunspot near the edge in the 11 o'clock position.

Right from the outset, I had a continual line up at the scope. There were a lot of kids with their parents doing their back-to-school grocery shopping. I didn't get away from the scope until a security guard took over for me so I could sneak away to the little boys room around 4pm. I took the opportunity to put on another layer of clothing in preparation for the evening observing. When I got back, the security guard was happily repeating some of the things he had heard me telling people about what they were viewing. He then went in and got me a coffee from the deli in the Save-On. Nice guy.

A couple of nice things that happened during the afternoon included an elderly gentleman who had lost his eyesight and wanted to touch the telescope and have me describe to him in some detail what he would see if he could look through it. It was a very moving experience for me, I must say. Later on, a lady with her young daughter came forward and the daughter asked me to explain the scope to her. She then signed what I had told her to her deaf-mute mother. Her mother then indicated she would love to look through the scope. It was again moving having her sign to her daughter and struggling to find the right terms to describe her experience. Her daughter was equally excited by her viewing.

After sunset, I took the solar scope off the mount and put my 6" Mak on the mount. It took about 20 minutes before Jupiter was spotted (by the security guard!) and I swung the scope around to it. I had a line up before I even had a target so I quickly stepped aside so people could see Jupiter against a still-blue sky. Three moons were clearly visible, however it took a young girl to

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I was fifteen years old when I first realized how breathtaking the night sky is. It was in a desert in Abu Dhabi where I first noticed all the stars smiling at me. In August 2010, I wanted to pursue my passion project: Astronomy.

I was excited when I saw the website <http://www.sfu.ca/starrynights/> and happy to see Dr. Howard Trottier bring awareness to youth. After enrolling in his course at Simon Fraser University, I started to understand the night sky. For many people it is just a sky with stars and Celestial Bodies but to me it holds a great significance. In my opinion, we are living in an age where we have just started to understand the universe and observe the wonders it holds for us.

Dr Howard Trottier then mentioned The Royal Astronomical Society Of Canada – Vancouver. At first I thought of it as an organization where people just meet and talk about the night sky. However, it is more than that. It is a society which consists of brilliant minds where people can come and ask questions about Astronomy. It definitely is exciting to be a part of RASC.

As days progressed, Dr Howard Trottier hosted our first Starry Night and I was excited. The night began by observing stars and the shapes they make in the night sky. Just before leaving, I caught a glimpse of someone using a telescope. It was pointed at a star. When I approached the telescope, I was told that the star was actually Jupiter. I was shocked—when I looked into the eyepiece I was

amazed. It was Jupiter, the largest planet in the Solar System. It was surrounded by four stars, which I realized were the moons. Now that I have observed Jupiter, I can only now understand how Galileo felt.

The Starry Night team, with the help of RASC, held another Starry Night event on December 4th. I asked Dr Trottier to lend me his personal telescope so I could use it for the night and also inform children about the night sky. It was a very cold night but it did not stop me from showing off Jupiter.

Recently, I purchased my 12-inch Collapsible Dobsonian from Vancouver Telescopes. The same day, I assembled it but unfortunately the rain stopped me from taking it outside. During that night, I kept on checking the weather forecast because I could not wait to take the telescope out. On December 17th, a bright light shinning through my window woke me up. My wish was granted—it was a beautiful morning and the forecast predicted clear skies for the night. Around seven in the evening, I loaded my telescope in the car and drove to Citadel Hill (in Port Coquitlam). The location is an excellent observing point because it is a dark hill and the city lights do not obstruct your vision.

At first it was a challenge. I was very discouraged when I could not see the Moon in my finder scope. After much frustration, I was able to align the finder scope. I inserted the eyepiece and even before looking into the eyepiece, a bright light was hitting my eyes. It felt like someone

on the Moon took a giant torch and pointed it at me. When I looked into the eyepiece my heart dropped, there it was: Earth's Moon. I have seen the Moon in many pictures but you can only fully understand it when you see it. The maria and the craters on the Moon tell us how lucky we are to exist. For me, the Moon is a shield for the Earth.

While looking into the eyepiece, I pulled out my phone and sent this email to Dr Howard Trottier:

Hey howard

Oh my god omg omg

The moon looks brilliant

The craters and the light coming from it is amazing !!!!

Sincerely

Rohit

I was again mesmerized when I pointed my telescope at Jupiter. I could see the giant planet and this time only three stars next to it. Obviously, the fourth moon is in transit. Many people passed by as I was looking at the Moon, and even they could not believe how majestic our Moon is.

December 17 is a night I will never forget. I am hoping there are more clear skies so I can take the telescope out and look at more celestial bodies. In closing, I would like to thank everyone at RASC–Vancouver for helping me open my mind and igniting the passion I have for Astronomy. ★

President's Message

On behalf of the Council of the Vancouver Centre of the RASC, and as its new President, I would like to take this opportunity to welcome you to the exciting start of a New Year of activities that is sure to inform our membership, reach out to the public, and provide many opportunities to experience the cosmos! I would also like to look ahead to a new set of opportunities for us to collectively strengthen our Vancouver Centre (VC).

I first wish to extend my warmest personal appreciation and affection to our Immediate Past President, Ron Jerome. At our 2010 AGM, Ron was publicly recognized by council for "his kind stewardship, and sage advice in directing our centre over the last two years as president" (to quote from Secretary Alan Jones' AGM report). His leadership has set the stage for many of the new initiatives that will be brought forward by council this year, in concert with you, our membership.

We start off the year with a truly exceptional "catch" for our public meeting on January 13, when (thanks to our resourceful Speakers Chair, Barry Shanko) we host Dr. John Mather of the Goddard Space Flight Centre, co-recipient of the 2006 Nobel Prize in physics! Dr. Mather is currently a principal investigator for the James Webb Space Telescope (set for launch by 2015). He will talk about his work from the early 1990s that led to his Nobel Prize, and will look ahead to the potential for the discovery of alien life by the

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About RASC

The Vancouver Centre, RASC meets at 7:30 PM in the auditorium of the H.R. MacMillan Space Centre at 1100 Chestnut St., Vancouver, on the second Thursday of every month. Guests are always welcome. In addition, the Centre has an observing site where star parties are regularly scheduled.

Membership is currently \$73.00 per year (\$41.00 for persons under 21 years of age) and can be obtained by writing to the Treasurer at the address on page 5. Annual membership includes the invaluable Observer's Handbook, six issues of the RASC Journal, and, of course, access to all of the club events and projects.

For more information regarding the Centre and its activities, please contact our P.R. Director.

NOVA, the newsletter of the Vancouver Centre, RASC, is published on odd numbered months. Opinions expressed herein are not necessarily those of the Vancouver Centre.

Material on any aspect of astronomy should be e-mailed to the editor or mailed to the address on page 5.

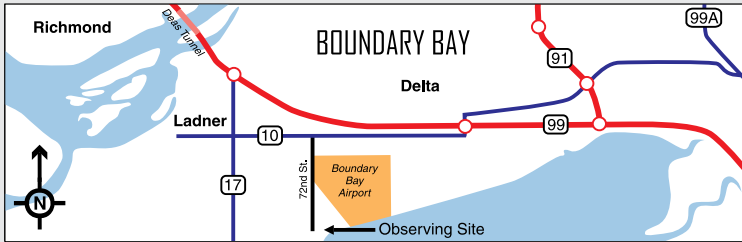
Advertising

Nova encourages free use of its classified ads for members with items for sale or swap. Notify the editor if you wish your ad to run in more than one issue.

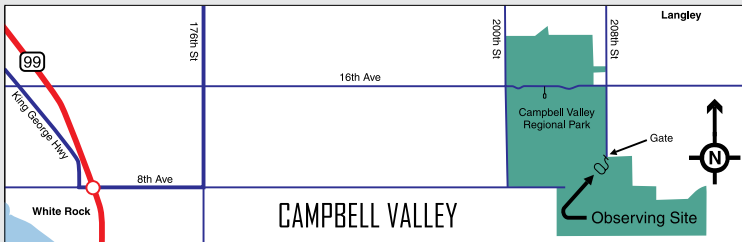
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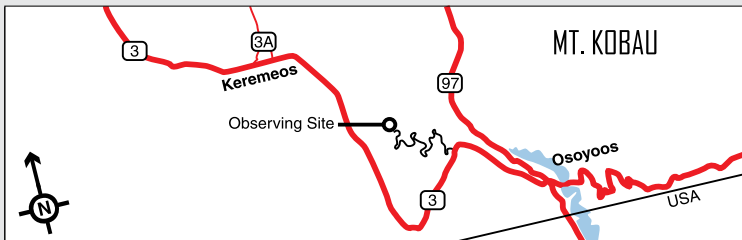
OBSERVING SITES



Site of the regular Saturday night star party. On the dike at the foot of 72nd St.



Our alternate observing site. Contact Bruce MacDonald (604-882-3820) to see if this site is in use.



Site of the annual Mt. Kobau Star Party organized by the Mount Kobau Astronomical Society

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 new space telescope! (Looking for a short backgrounder on Dr. Mather's Nobel Prize work? I give my take below.) Our speaker line-up for the rest of 2011 already includes a noted amateur telescope maker and astro-imager, and a science writer with an intriguing story to tell, long-forgotten until now, of one man's (impossible) dream to build the world's largest telescope—on Grouse Mountain!

Look forward as well to a wide range of community events and

star parties! VC is partnering with several groups committed to astronomy outreach, to put on events throughout the year and across the Greater Vancouver area and beyond. These groups already include Metro-Vancouver Parks, Simon Fraser University, the International Lunar Observatory Association, the NRC/Herzberg Institute of Astrophysics, the Vancouver Telescope Centre, and, of course, the HR MacMillan Space Centre.

Council has also set an ambitious set of goals to strengthen VC in

2011. First among these is to increase the value of VC for our membership. In particular, in February we will change the format of our monthly public meetings at the Space Centre to include a short, new "What's Up?" segment, geared especially to newer and/or less experienced members, including practical tips on observing the night sky, and accessible segments on new developments in cutting edge astronomy and space science. This content should also help to attract new members, and might even be

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entertaining for more seasoned members ;).

Of prime importance is to increase membership, especially young families and university-age students. To this end, council aims to increase the presence of VC on the web, which will also increase service to our existing membership. This includes a revamped and higher-profile web site, with content to attract the public and of interest to our members. And we aim to connect VC to the public, and our members to each other, through Facebook and Twitter, including real-time postings from our events, and messages on anything astronomical that happens to grab the interest of our members! We also aim to capitalize on VC involvement with the successful Simon Fraser University outreach program for young families (on this I'm wearing two hats: see below).

Council also aims to establish new ways to encourage our members to volunteer, and to better coordinate our public events; to build on the recent successes of our Light Pollution Abatement campaign; to increase our media exposure (see our web site for my appearance as the new President of VC on the GlobalBC morning news show in December!); to make improvements to our observatory in Maple Ridge (the Antony Overton Memorial Observatory), and encourage use of that facility by our members, as well as by invitation to local university students; and to improve our telescope loaner program for VC members.

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LIBRARY

The centre has a large library of books, magazines and old NOVA's for your enjoyment at the GMSO. Please take advantage of this club service and visit often to check out the new purchases. Suggestions for future library acquisitions are appreciated.

RASC-VC on the Internet

<http://rasc-vancouver.com> or
<http://www.rasc.ca/vancouver>

Details of upcoming meetings and events can be found at our Meetup group at:

<http://astronomy.meetup.com/131/>

H.R. MACMILLAN SPACE CENTRE

The H.R. MacMillan Space Centre Society is a non-profit organization operating the H.R. MacMillan Space Centre and the Gordon M. Southam Observatory. Annual membership (\$30 individual; \$80 family) includes newsletter, discounts on Space Camps, birthday parties, lectures, Museum of Vancouver admission, plus free admission to the Space Centre. Admission includes: multi-media Planetarium productions, interactive demonstrations and hands-on exhibits. For membership, contact Gayle Seaman 604-738-7827 (ext 221) or star@spacecentre.ca

<http://www.spacecentre.ca>

MEMBERSHIP HAS ITS PRIVILEGES!

New members, did you know? The Vancouver Centre has 8 telescopes available for loan free of charge! We have telescopes ranging from 60mm to 10" diameter. For more information see the Director of Telescopes in the meeting room of the GMSO after the members meeting. All telescopes are to be picked up and returned at the GMSO. The loaner period is for one month, to be returned after the next meeting. Telescopes are not allowed to circulate outside of these meetings. You can now reserve two different telescopes per year and use what is left at the end of the meeting anytime.

Your greatest opportunity as a member of the RASC is to take advantage of the company of other enthusiasts to increase your knowledge, enjoyment and skill in astronomy.

The best thing you can do to gain the most from your membership is to get active! Take in the club meetings; engage other members with questions; come out to observing sessions (also known as "star parties"), and, by all means, volunteer to take part in our many public events.

Observing takes place at Boundary Bay on the dike at the south end of 72nd St. in Delta (see map on p. 4). We are there most clear Friday/Saturday nights. Contact Jason Rickerby at 604-502-8158.

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January

15 – Ray Villard talk at UBC: When will we find Earth II – The First Inhabited Extrasolar Planet? <http://vaninst.ca/VbVillard.html>

March

19 – Night Quest at Pacific Spirit Park.

April

10 – ILOA Galaxy Forum at HR Macmillan Space Centre.

May

2-8 – International Astronomy Week

7 – International Astronomy Day & Urban Star Quest at Aldergrove Lake

July

July 30 - Aug. 7 – Mt. Kobau Star Party

August

Aug. 27 - Sept. 3 – Merritt Star Quest

December

8 – AGM

AOMO Report

by Wayne Lyons

In reviewing my reports on our observatory, I have just realized that it has been a while since my last report. After the success of the Celestial/Terrestrial Event held in the spring, there were two more well-attended public observing sessions held in the Malcolm Knapp Research Forest this summer. Notification of these sessions was posted on the Meetup website.

This September, Dan Collier offered to look into the problems of

Finger Lakes Imager. It was reassuring that it was not “operator error” and I was not the only person having difficulty with the imager. Dan has already had some success with the CCD camera and I am confident it will be available for use soon.

This will be my last AOMO report in the role of Chairperson of the Observatory Committee. Mark Eburne and Leigh Cummings will be taking over organization and administration of our observatory

in 2011. I would like to thank all of our members who have taken an opportunity to attend any of the activities that were made available during the time I have spent as Chairperson. I wish Mark and Leigh continued support from the members of Vancouver Centre and all the best with their aims for the future of the observatory. ✨

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point out to me that a fourth moon was just on the edge of the planet. Sure enough, when I took my time I was able to see it almost touching the edge. I checked the SkyNews Magazine I had brought with me and sure enough Io was due to go behind Jupiter, which it promptly did. I was scooped later when one of the check-out girls working at Save-On was at the scope when Io re-appeared on the other side.

After it got dark enough, I tried to view Uranus. I was able to spot it on the upper edge of my view as Jupiter was at the lower edge of the view. Lots of people wanted to see

the little blue-green dot for themselves so I sometimes set up the double view and sometimes isolated the view when some people had trouble spotting it. The parking lot lights made it pretty challenging to view Uranus, however being that close to Jupiter helped. I never attempted to find any other objects as the line-ups at the scope never let up. I had planned to quit around 8pm to go home for supper, however I ended up staying in front of the store until 10pm. Supper ended up being a little late (or you could call it a very early breakfast).

I promoted RASC as much as I could but I only handed out sam-

ple Novas to people who showed a genuine interest in RASC. A lot of people asked me if there was a local meeting of astronomers. I told them we have several local members who put on local events through the year, however the general membership meetings are in Vancouver. I did mention that there was also an independent club based in Abbotsford called the Fraser Valley Astronomical Society. The only thing I feel bad about is that I forgot we had some of the trading cards in the box Wayne gave me that I could have handed out to some of the more enthusiastic kids that were there. I

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This might also be a good time to answer the questions, “Who the heck am I?” and “How the heck did I get on Vancouver Centre council?” for the many members who I have yet to meet ;). While my day job is as a Professor of Physics at Simon Fraser University, my nighttime identity has for some time been best described as Obsessive Amateur Astro-Imager (more on that in a future NOVA article!). But over the past two years, my obsession for astronomy has fused with my day job, with SFU hosting a program of public outreach that has welcomed over 2,500 grade-school age kids at daytime astronomy workshops on the Burnaby campus, along with hundreds of their teachers, parents, and guardians. SFU has also hosted some 2,000 members of the public at evening star parties and special “theme” events over the past two years. And here’s the rub: None of this would have been remotely possible without the extraordinary support provided by Vancouver Centre, in the form of the many dedicated RASCAL volunteers who assist at SFU events, and financial support that has provided educational resources through SFU to kids, teachers, and schools. Joining Vancouver Centre council began

as a way for me to return a small part of that support. But this has turned into a wonderful avenue for doing more of what I love: sharing experiences with fellow amateur astronomers, and reaching out to the public. As President, I hope to help realize the many exciting new initiatives of Vancouver Centre, with my number one personal goal being to recruit new members, especially young people, who represent the future of VC.

Here finally is the backgrounder I promised on the work that won Dr. Mather the Nobel Prize ;). In 2006, the Nobel committee recognized Dr. Mather and Dr. George Smoot “for their discovery of the blackbody form and anisotropy of the cosmic microwave background radiation.” Their work as principal investigators of the COBE satellite mission in the early 1990s dramatically established the presence of very small variations, or anisotropies, in the temperature of the cosmic microwave background (CMB) radiation, the leftover “heat” of the Big Bang. These variations trace the tiny contrasts that were present in the distribution of matter in the early universe, and which grew to become the large-scale structures (immense galaxy clusters and super-clusters) that we see in the universe today. The detection

of the anisotropies in the CMB (which “had” to be there) had been a “holy grail” of astrophysics ever since the discovery of the CMB itself in 1964, by Arno Penzias and Robert Wilson, for which they received the 1974 Nobel Prize. More precise measurements of the anisotropies in the CMB, to more deeply probe the physics of the early universe, continue to be an extremely hot pursuit in space science. These include stunning measurements of the age and geometry of the universe obtained by the NASA WMAP satellite, launched in 2001, and with still more penetrating results expected to come from the Planck satellite mission of the European Space Agency, launched in 2009.

In closing, I look forward to getting to know many more of our members, and I hope to encourage you to come forward and volunteer for any one of our many activities and initiatives. Please contact me, or any other member of council. Our contact information can be found on the VC web site.

Here’s to clear skies and more time under the stars! ✨

Howard Trottier
President, RASC-VC
Professor of Physics, SFU

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also had several school teachers ask about astronomy and education so I promoted both our publications as well as SFU’s StarryNights program. I had one young lady from Nacusp telling me about a very challenging assignment she was working on in

school. That I’ll tell you about later. Everybody commented on the fact that Jupiter was the only object you could see from my location. Later in the evening, I was able to make out Orion rising over the Mall if I blocked out the lights with my arm. The continual lineup to see Jupiter

did not give me time to try to swing the telescope around to view the nebula. Maybe next time.

Overall, I can say it was a very successful public viewing event. I certainly had fun! ✨

Proud To Serve Vancouver's Astronomical Community



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