

NOVA

NEWSLETTER OF THE VANCOUVER CENTRE RASC
VOLUME 2017 ISSUE 4 JULY/AUGUST 2017



Canada's Sesquicentennial Day in Maple Ridge

by Leigh Cummings

HAPPY 150TH BIRTHDAY, CANADA!

Once again, the Royal Astronomical Society of Canada – Vancouver Centre was invited to take part in celebrations on Canada Day in Maple Ridge. This year being Canada's Sesquicentennial, the event was extended in length and content. We committed to being in the park from 10 in the morning until 10 in the evening, a full 12 hours. Thank goodness we have such a strong volunteer base to call upon.

I would like to take a few lines to thank our volunteers who de-

cidated to celebrate our nation's 150th birthday while giving our guests a mind-expanding look at the Sun, Venus, the Moon, and Jupiter through their telescopes. Those of



us without a telescope did the very important job of engaging people at our table, teaching them about star wheels and our club's outreach

programs, as well as relieving others at their telescopes. I want to thank Suzanna Nagy, William Fearon, Karl Miller, Kyle Dally, Jennifer Kirky, Ken Jackson, Robert Conrad, Nevada Janzen, Wilfred Lai and Wayne Lyons. They all made the day a great success. I also want to give a shout out to my trusted and reliable volunteer, Terry McComas, who volunteered but was unable to make it due to an injury to his foot, suffered the night before. A wish for a speedy recovery Terry.

In the morning, I thought I was

continued on page 6

JULY 13

SFU

Phil Stooke: Mapping asteroids and other non-spherical worlds. Room SHW10081. See Meetup for details.

SFU

NO MEETING IN AUGUST

SEPTEMBER 14

SFU

Brian Anderson of John Hopkins University: "An Overview of Messenger's Mercury Mission." See Meetup for details and room location.

SFU

Members' Gallery



Vancouver Aurora by Milan B

Aurora on May 28th 2017. A 30 sec exposure facing due north. Capella, which never sets behind the mountains from this location, is visible approaching the lowest point in the sky, while Cassiopeia is also visible above the building on the right.

Moon and Planets by Elena Popovici

Moon and planets to the West. Mars (magnitude 1.48) appears brighter than Mercury (mag. -0.28) because the latter is against the evening twilight. Also visible to the right of the planets, almost stacked one on top of the other, are the stars Hamal (mag. 2) and Sharatan of the constellation Aries. 1sec exposure at ISO 800.



President's Message

by Suzanna Nagy

ECLIPSE SAFETY AMBASSADORS WANTED: We have all been hearing it and reading it for a year but the August eclipse is now only a few weeks away. Many of my fellow RASC members have plans to drive south to the area of totality. However, there will be a few of us remaining in the Lower Mainland and so your RASC Centre is planning a

local partial solar eclipse event at a location still to be determined so keep an eye on our website and Meetup for more information.

As we near closer to the big day, we can expect substantial media hype and many of our own friends and family becoming curious about the eclipse. At this time, I'm going to make a request of all of my fel-

low amateur astronomers to become Eclipse Safety Ambassadors and stress the importance of safety to everyone that may look to you for information. Please remind everyone that they should not look at the Sun directly as unfiltered sunlight will damage your eyes and can cause permanent blindness.

continued on page 4

About RASC

The RASC Vancouver Centre meets at 7:30 PM on the second Thursday of every month at SFU's Burnaby campus (see map on page 4). Guests are always welcome. In addition, the Centre has an observing site where star parties are regularly scheduled.

Membership is currently \$78.00 per year (\$45.00 for persons under 21 years of age; family memberships also available) and can be obtained online, at a meeting, or by writing

to the Treasurer at the address below. 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 nec-

essarily those of the Vancouver Centre.

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

Remember, you are always welcome to attend meetings of Council, held on the first Thursday of every month at 7:30pm in the Trotter Studio in the Chemistry wing of the Shrum Science Centre at SFU. Please contact a council member for directions.

2017 Vancouver Centre Officers

President Suzanna Nagy
president@rasc-vancouver.com
Vice-President Leigh Cummings
vp@rasc-vancouver.com
Secretary Adrian Mitescu
secretary@rasc-vancouver.com
Treasurer Bruce Hutchison
treasurer@rasc-vancouver.com
National Rep. Kenneth Lui
national@rasc-vancouver.com
Librarian William Fearon
library@rasc-vancouver.com
Public Relations Scott McGillivray
publicrelations@rasc-vancouver.com

LPA Pascal Pillot-Bruhat
lpa@rasc-vancouver.com
Dir. of Telescopes Don Duthie
telescopes@rasc-vancouver.com
Observing Robert Conrad
observing@rasc-vancouver.com
Membership Elena Popovici
membership@rasc-vancouver.com
Events Coordinator Jeremy van den Driesen
events@rasc-vancouver.com
Education Bill Burnyeat, Leigh Cummings
education@rasc-vancouver.com
AOMO Alan Jones
aomo@rasc-vancouver.com

Merchandise Kyle Dally
merchandise@rasc-vancouver.com
Webmaster Ken Jackson
webmaster@rasc-vancouver.com
NOVA Editor Gordon Farrell
novaeditor@rasc-vancouver.com
Speakers Scott McGillivray
speakers@rasc-vancouver.com
Past President Mark Eburne
At Large Howard Trottier, Francesca Crema,
Milan B
Trustee Pomponia Martinez
Honourary President J. Karl Miller

Library

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

On the Internet

<http://rasc-vancouver.com> or
<http://www.rasc.ca/vancouver>
<http://astronomy.meetup.com/131/>
<http://www.facebook.com/RASC.Van>

 @RASC Vancouver

Mailing Address

RASC Vancouver Centre
PO Box 89608
9000 University High Street
Burnaby, B.C.
V5A 4Y0

Map to Meeting Site



Our July meeting is in room SWH10081 of Saywell Hall, at the end of the corridor as indicated by the arrow on the map.

Pay parking is available at several locations located around campus (indicated as "P" on the map).

continued from page 3

Please remind everyone that they **MUST** use a solar filter to view a partial solar eclipse. **NEVER** use photographic filters, sunglasses, x-ray film, CDs, etc. Even smoked glass is harmful as although it will dim the Sun, ultraviolet and infrared light will still pass through.

NEVER look directly at the Sun with binoculars or a telescope. Also, **NEVER** use eclipse glasses with a regular telescope as the magnification will render the eclipse glasses harmful.

RASC National Office has distributed Solar Eclipse Shades to all Centres and your Vancouver Centre

has a supply available for free. We will be offering these Eclipse Shades to all who attend our meeting in July. We will be giving them away at all of our upcoming events and we will have some on hand for the eclipse event itself.

Fingers crossed for clear skies on August 21. ✨



The 2017 Martha Pearse Science Fair Award goes to Cheryl Chen and Stuti Sharma (left) for their project on designing an orbital space settlement called *Charma 2.0*

Our 2017 Astronomy Day youth prize drawn winner is Roy Chen of Burnaby (grade 7), seen here (right) with our President, Suzanna Nagy. Congratulations, Roy!



2017 General Assembly in Ottawa

As the National Representative of RASC Vancouver Centre, I attended the 2017 General Assembly, which took place from June 30th to July 2nd at Algonquin College in Ottawa. Among topics addressed at the National Council Meeting and the Annual General Meeting, there were discussions on various possible methods to increase revenue. There were also reports on the operations of publications such as *Sky News*, and the upgrading of iMIS, the computer system being used to manage membership. An important question covered was:

How to increase the diversity of our members? In fact, there was an

hour-long panel discussion specifically on this topic where thoughts were shared on how to create a more welcoming environment for young members and female members.

The GA also consisted of lectures by RASC members and guest speak-

ers. The keynote speaker was Ken Hewitt-White. The title of his talk was, *Astronomy, the RASC, and Me*. A large part of Ken's lecture was on his 20 years of production work at the H.R. MacMillan Planetarium in Vancouver.

I was very interested in attending the talk by Dr. Brendan Quine on *50 Years of VLBI at the Algonquin Radio Observatory*. Unfortunately, I had to miss the presentation as I was in the National Council meeting which took place at the same time.

The lecture at the RASC Awards Banquet was titled, *24 Years of Adventures and Explorations at the Observatoire du Mont Mégantic and the Canada-France-*

Hawaii Telescope given by Dr. Nadi-
continued on page 8



Ken with the Canadarm at the Canada Aviation and Space Museum

Membership has its Privileges!

New members, did you know? The Vancouver Centre has several telescopes available for loan free of charge! We have telescopes ranging from 60mm to 10" in diameter. For more information see the Director of Telescopes after the members meeting. 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 ac-

tive! 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.

For the usual observing sites and times, visit our website at <http://rasc-vancouver.com> or contact the Observing Chair at observing@rasc-vancouver.com.

Upcoming Events

July

22 - 30 – Mt. Kobau Star Party
22 – Solar Event, Campbell Valley Regional Park

August

12 – Perseid Meteor Shower at Aldergrove Lake
19 – Starry Nights at Deas Island Regional Park
19 - 26 – Merritt Star Quest
21 – Solar Eclipse viewing at Science World

September

18 - 24 – Science Literacy Week

December

14 – AGM

continued from page 1

going to be too early as I only live a short distance from the Peace Memorial Park in downtown Maple Ridge. However, as it turned out when I arrived, Karl, Kyle, Wayne and Robert were already there and others were walking in as I parked my car. With so much help, we had no trouble getting our tent and all of our displays set up by the 10 am start.

We had three Hydrogen-alpha solar telescopes, two shielded telescopes and a Sun Spotter all focused on the Sun, as well as three more telescopes viewing Venus. This gave our guests a better variety of

targets and views than last year. It helped to make up for a very quiet Sun on the day. We were only able to spot one tiny sunspot and only a whisper of prominence. I especially liked Ken's setup with both a standard telescope and an Ha telescope

on the same mount. He was inspired by Karl's similar setup at last year's Campbell Valley Solar event. I really liked the sun shield he rigged up to shade the eyes while trying to look through the eyepieces. The idea of two telescopes on the same mount added an additional educational element in regards to how the



telescopes differ in design and the view they offer.

People found it amazing to be able to view Venus against a blue sky. Many people thought they were actually looking at a quarter Moon, while others simply com-

pared what they were looking at to a quarter Moon. We were able to explain to them how significant it was when first viewed with a telescope by Galileo Galilei. Observing the phases of Venus convinced Galileo that Copernicus was correct and he rejected Tycho's model of the solar system as an unnecessary hybrid of

the Ptolemaic model. Then again, some viewers thought it was just a pretty sight.

I was using my HEQ5 Pro to track Venus with just minor adjustments from time to time. Robert was using his 10" Dob and Karl was using his trusty refractor on a manual mount, both of

which take a great deal more skill to keep on target. Kudos to the both of them for their much greater effort.

After Venus set and the Sun got too low in the sky, we shifted our attention to the Moon and Jupiter.

continued on page 9

My First RASC Meeting

by Don Duthie

There I was at my first Royal Astronomical Society of Canada monthly meeting. I entered the hundred and fifty seat auditorium a little intimidated. The room was filled with scholars, professors and amateur astronomers. I found a seat in the back, hoping to hide my nerves. The question racing through my mind was, "How am I going to convince these academics that I belong here? Am I going to be accepted? Will they notice my inexperience?" I didn't even want to open my mouth for fear of sounding inadequate. After the presentations on the latest astrophysics topics, I took a deep breath and went down and introduce myself to the council members. Immediately I launched into my story. I explained that I'm currently enrolled at University of the Fraser Valley, focusing on Physics and Math. I explained I'm a plumber/"A"-ticketed Gas Fitter, connecting my knowledge of the universal gas laws and properties of water, one of the major elements everyone looks for when there're looking for life. Finally, my enthusiasm. By the end of the conversation, everyone in the room could see my love for the cosmos. I am home. My goal is to be accepted into this society by convincing the members that I do belong here. My commitment to RASC, my mechanical background and my passion for the stars will help me integrate into this highly-educated discourse community.

Occasionally, dreams can come true. Now, more than ever, I must prove myself. The past three months

since the meeting have been fantastic. I have volunteered for Astronomy Day, entertaining children and families about the wonders of space. I joined the Deep Sky Observing Group which is allotted 20% of the telescope time up at Simon Fraser University. This enables me to spend quality time with the other members. Getting to know each other's skills and experiences. I am in the process of being trained on operating the telescope. For example, viewing the latest supernova in the Fireworks Galaxy. In time, I am optimistic the research and imaging we are doing at the observatory will one day be included in my undergraduate studies. To legitimize myself now, and gain the experience of running the telescope, should give me the opportunity for a new career. This will make me valuable and gain the trust of my peers. By gaining that trust I have already been nominated to council. So far, the greatest honour is being voted in as the Director of Telescopes. I'm in charge of the loaning out the telescopes to the current members. The validation I have been looking for. A symbolic gesture of acceptance. I have arrived. I'm now ready for the Challenge.

What a Challenge it will be. The learning curve is huge. Entering this new discourse community is exciting and frightening at the same time. The formalities, the language, and wisdom can be overwhelming. My commitment and dedication to RASC will attest to my acceptance into this community. The only way

to be accepted is to stay on top; keep up with the latest discoveries, learn as many terms as possible and respect the experience surrounding me. You cannot compete with a person that has been studying all their lives. Immersing myself into the community enables me to learn the customs that come with being an astronomer. Yes, they'll see my inexperience. Yes, I'll pronounce constellations wrong. And yes, I might embarrass myself one or two times by saying something obvious. There will be people thinking, what's this "kid" doing here? Will they take me serious or shrug me off? Time will tell. Nevertheless, my allegiance to RASC will be acknowledged through my devotion to higher education, working knowledge of the universe and steadfastness to the research.

Admittedly, being accepted in to the discourse community of astronomy is going to be a delicate journey. It is going to take many years of analysis and hours of observations. My constant research of the sky will eventually gain the respect I desire. Right now, I'm the apprentice. The significance of this journey is doing what you love. Follow your passion. Life is too short. I suggest that everyone should follow their dreams. I promise you that if your follow your desires, they can bring great happiness to your life. Along with status and a solid career. I believe everyone should take the chance and challenge themselves to join a discourse community and embrace your inner (space) self. ✨

continued from page 5
ne Manset.

On the morning after the GA, I joined a tour to the Holleford Impact Creator lead by Charles O'Dale.

Outside of the GA, I was at Canada's 150th Birthday Celebration on Parliament Hill. As a space fan, I cannot miss the opportunity

to visit the Canada Aviation and Space Museum where I saw the Canadarm and almost emptied my wallet at the gift shop.

As I thought the excitement was over on my last day in Ottawa, I met Sharon Odell, Ottawa Centre member, who brought me to the historic Dominion Observatory and gave me a tour outside of the

observatory building. I don't think I can find a better tour guide for this observatory as Sharon wrote her Master's thesis on it.

The 2018 GA will be hosted by the Calgary Centre. They are preparing some very fun and interesting activities and I would encourage any Vancouver Centre member to participate. *

The Dominion Observatory (right) and its sundial (below)



Brian McCullough speaking at the Awards Banquet (left)

continued from page 6

I couldn't find Jupiter at first (Karl and Kyle beat me to it) so I concentrated on the Moon for a while. As the evening progressed into twilight, we were able to view Jupiter which greatly entertained the public until our quitting time of 10pm. People were thrilled upon seeing the atmospheric bands as well as the four Galilean moons.

All day long, Kyle, Jennifer, Suzanna, Wilfred and Nevada were very busy at the table as well as relieving our other volunteers at the telescopes. They gave away every star wheel we had after demonstrat-

ing their use. It was good to see so many interested people walking around with a fistful of our hand-outs.

Another thing that struck me about this year's event was the international flavour the organizers brought to it. It was a great celebration of the diversity of cultures that makes our country great. There were booths dedicated to representing the peoples of all the various cultures living in our area, from our original indigenous peoples to our newest arrivals. We enjoyed hearing a variety of traditional music and watching dancers in cultural attire

bring their history alive for us. It was very entertaining and educational.

We also had people visiting from all over the world. They came from as close as Seattle, Washington to as far away as China, Japan, the Philippines, Italy, the Netherlands, Israel, Great Britain, France, Germany, Hungary, Russia, and the Ukraine, to name a few.

As usual we had a great time providing education and a great thrill for many people. Thanks to the City of Maple Ridge organizers and to our own volunteers for making the day a huge success. ✨

Photos courtesy of Leigh Cummings and Suzanna Nagy



Astronomy Day 2017 at SFU



Canada Day at Maple Ridge





Eta Carinae Nebula (NGC 3372)
Chile, 1 High Mag
Jan 22nd, 2017 05:18:54 UTC
Taken by Robert Conrad

The Eta Carina Nebula (NGC 3372) by Robert Conrad

Taken on 22 January, 2017 from the Canary Islands using the online SLOOH telescope.