

NOVA

NEWSLETTER OF THE VANCOUVER CENTRE RASC
VOLUME 2018 ISSUE 4 JULY/AUGUST 2018



What Canada Day Meant for Me This Year

by Suzanna Nagy

Canada Day in Maple Ridge is an annual outreach event for RASC Vancouver. It is a chance for us to participate in celebrating Canada as well as being able to engage the public-at-large in our shared love of astronomy.

This year's event took on a deeper meaning for me this time. At one point during the afternoon, a little boy (probably no more than five years old) and his mother were

visiting our RASC booth. This little boy, his chubby face painted with little Canada flags, was clutching his just-received RASC star wheel and thanked me by shouting out "Happy Canada Day!"

His joy and enthusiasm brought a smile to my face but also tears to my eyes because it caused me to remember a recent visit to our Centre by a

(which is not part of the school curriculum there). Unfortunately, in 2017 Mr. Bakhshi had to flee Afghanistan because the Taliban put a

price on his head simply because he was trying to teach the science of astronomy to children. You will be hearing more from your RASC Vancouver council on this as we try to find ways to assist Mr. Bakhshi as he continues to work with the Afghanistan Astronomy As-

sociation, albeit from abroad.

But my point is, there I was on July 1st celebrating Canada Day and teaching astronomy to the children and families that were stopping by

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refugee from Afghanistan. This refugee, Mr. Bakhshi, is the founding member of the Afghanistan Astronomy Association and was volunteering at schools teaching astronomy to the Afghan children in Kabul

JULY 12

SFU

Telescope workshop and show-and-tell. We'll be meetin on the plaza outside the Trottier Observatory. See Meetup for details.

SFU

NO MEETING IN AUGUST

SEPTEMBER 13

SFU

Richard Shaw from CHIME. See Meet-up for details.

SFU

Astronomy Day Gallery



The Astronomy Day prize draw winners.

At left are the winners of the telescope draw: the Radvinsky family, Michael and Dina with boys Adam and Eric, from Coquitlam.

On the right we have the winners of the binoculars: the Nikpaykaran family, Ali, Ghazal, Liana (10) and Adreana (6, pictured with her prize), from Burnaby.

Thanks to Pacific Telescope and Markarian Fine Optics for the prize donations.



President's Message

Yippee, it's July! The nights are getting longer! We are over the hump. The long days are starting to get shorter. That's what we astronomers look forward to. We have to be patient, though, as it will take most of July before true astronomical darkness re-visits our latitude.

In the meantime, we can still get great views of Jupiter, Mars and Saturn in the coming nights. Sadly, the weather on Mars has turned against astronomers. This time it is dust that is the culprit as the entire planet is engulfed in a mega sandstorm that might last for months.

by Leigh Cummings

This will make viewing any surface details out of the question. We will just have to be satisfied with viewing a bright orange dust ball. I could roll a tennis ball across my workshop floor and hang it from a tree for the same view.

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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 \$81.00 per year (\$47.00 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.

2018 Vancouver Centre Officers

President	Leigh Cummings president@rasc-vancouver.com
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Past President	Suzanna Nagy
At Large	Howard Trotter, Bill Burnyeat, Isabelle Eymere
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>

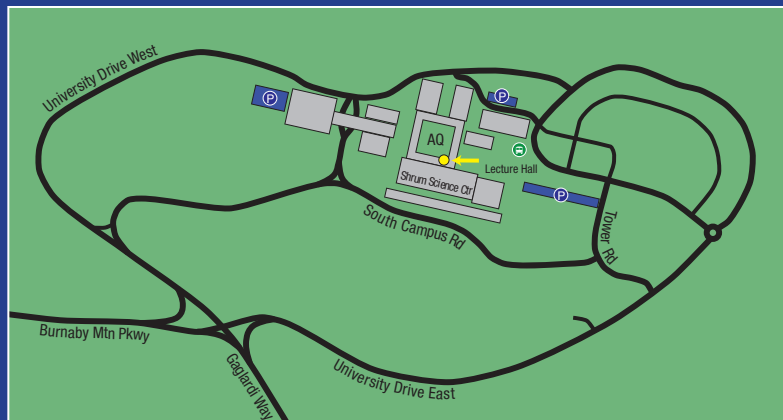


@RASC Vancouver

Mailing Address

RASC Vancouver Centre
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Burnaby, B.C.
V5A 4Y0

Map to Meeting Site



Our May-Jul meetings are in room AQ3159, located near the southeast corner of the Academic Quadrangle as indicated by the arrow on the map.

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

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The bright side about Mars being obscured to our telescopes is that we can soak in the spectacular naked-eye view Mars will afford us during its closest approach to Earth since 2003. It will not be until Monday, August 29, 2287 that it gets closer to Earth. Its next close approach, (not quite as close as this year) will be in October 2020.

During these close approaches, Mars will become the blood-red planet just like it appeared to our ancient ancestors throughout human history and pre-history. Just try to feel the awe the ancients must have felt when they saw the change in brightness, colour and direction that Mars displayed to them. No wonder it was considered a "god." Get out and enjoy the show.

Come August, we have sev-

eral events to look forward to. From August 4th to August 12th there will be the annual Mt. Kobau Star Party. This is an event for serious dark sky observers. It is family friendly, but I highly recommend checking out their website before venturing up the mountain. The webpage is at: <https://www.mksp.ca>.

For families looking for a more casual event, there will be Metro Parks annual Perseid Meteor Shower event held in Aldergrove Regional Park on Saturday, August 11th. This is the only night of the year that Metro Parks allow overnight camping. From 8 pm to 11 pm, Metro Parks puts on many activities aimed at the young of age or heart. You always learn more when it is fun. We will be there in force, having guest speakers and, if the weather co-operates, meteor watching in the field as well as

telescopes and binoculars set up for viewing targets until daybreak.

The very next weekend, Saturday, August 18th, from 7:30 to 10 pm, Metro Parks will hold their Starry Night at Deas Island Regional Park. We will have a few of our volunteers at that event as well. Another enjoyable evening for family fun and learning. Check out their calendar of events at: <http://www.metrovancouver.org/services/parks/ParksPublications/CIO-Summer2018.pdf>

Some other dates in August and early September have not been finalized so make sure you keep an eye on our Meet-up site or our website for on-going events news.

Let me close by wishing everyone a safe and fun summer with lots of clear nights to get to know the night sky like our ancestors did before us. ★

The Dangers of Astronomy in Afghanistan

by Bill Burnyeat

Dropped eyepieces, rain clouds and a power supply that won't supply; those are some of the headaches in Canadian Amateur Astronomy. In other places, the setting of a telescope outside and welcoming children to look might count as a death-defying act.

In areas of the world rocked by war, one would think that outreach astronomy would offend no-one and go unobserved. This is not true, at least in Afghanistan. The trouble is, two competing views of the cosmos are squaring off. One is the modern view of the nature of bod-

ies in space, based on science, while the other is a sort of Medieval view based on village beliefs, some as old as antiquity, astrology and religious notions deriving from ancient texts.

Astronomical beliefs are not the neutral and abstract items of information that we in the west sometimes suppose. For example, in Afghanistan, if children are born with a disability they often blame the mother since it is thought that if the pregnant mom looks at an eclipse, an injury to the unborn child will result. A little astronomical information not only clears the

air of an error but can achieve a reconciliation between parent and child.

But not everyone cheers these developments. Many view with alarm ideas, not matter how refreshing, that come into the country from "western" influences and these opposing voices are organised and armed.

As a result, proponents of the apparently innocuous desire to let children look through telescopes at outdoor events have met with a campaign of terror directed against

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our booth without having to fear for my life. This is the freedom we celebrate in Canada every July 1st—a freedom so many fellow astronomy enthusiasts around the world cannot enjoy.

I would like to thank the RASC volunteers that gave of their time on

July 1st to man the booth, displays, and solar telescopes: Leigh, Karl, William, Terry, Arya, Ken, Wilfred, Kyle, and Jennifer.

The day started out with thunderstorms and, for a period of time, the ten of us were huddled together under our 10x10 tent trying to keep ourselves and our equipment dry.

However, the weather gods finally cooperated and by the afternoon the rain departed, the clouds cleared, and we had sun to dry out our belongings as well as point our solar telescopes to. We engaged with several hundred people and I am sure I speak for us volunteers when I say that we all had a fun Canada Day. ★

Membership has its Privileges!

Are you tired of looking at the same objects again and again (planets, moon, etc.)? Is your telescope collecting dust because it's hard to locate deep sky objects? Would you like to bring your observing to a stellar level? Robert Conrad, our new observing director, revived the Vancouver RASC observing group and invites you to join by sending him an email at observing@rasc-vancouver.com. Some of the benefits of belonging to this group include:

- Hands on training on how to operate the sfu Trottier observatory
- Weekly observing sessions at the observatory or at dark sky locations
- One-on-one coaching on how to locate thousands of objects in the night sky
- Attend small interactive seminars delivered by Robert on a range of topics including failsafe star-hopping, charting challenging objects and understanding the motions of the cosmos
- Learn to make your telescope dance by locating objects such as asteroids, nova, and supernovae
- Spectroscopy and imaging training from Howard Trottier and an opportunity to collaborate on observatory research projects
- Updates on observable sky events happening during the week like asteroid/comet/deep sky conjunctions
- Access to observing guides and lists that Robert created that took hundreds of hours to create and will help with planning observing sessions
- Knowledge and expertise from other observing group members
- Learn how to quickly and efficiently find and star-hop to deep sky objects using a range of binoculars and telescopes

Upcoming Events

July

28 – Mars close approach at Science World

August

4 - 12 – Mt. Kobau Star Party

December

13 – AGM

September

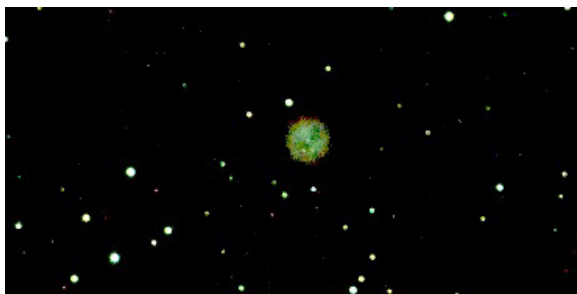
8 - 16 – Merritt Star Quest

Hoo... hoo... hoo...

I've been away for the better part of the last two months, and, being back home, decided to pursue my astronomical activities by using one of slooh.com's remotely-controlled telescopes.

About 2030 light years distant, in the constellation Ursa Major, you can find the Owl Nebula (M97). In 1781, the French astronomer Pierre Méchain discovered this planetary nebula. At a time when there was no photographic technology, some observers drew the nebula image

resembling an owl's head. That appears to be the source of the name. Here is a description found in



The Owl Nebula (M97) processed with Apple Preview

Wikipedia:

The nebula is approximately 8,000 years old. It is approximately

circular in cross-section with a little visible internal structure. It was formed from the outflow of material from the stellar wind of the central star as it evolved along the asymptotic giant branch. The nebula is arranged in three concentric shells, with the outermost shell being about 20–30% larger than the inner shell. The owl-like appearance of the nebula is the result of an inner shell that is not circularly symmetric, but

instead forms a barrel-like structure aligned at an angle of 45° to the line

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themselves. At least one very active amateur astronomer has now fled the country and has taken up residence here in Canada. We learned more about this here at the Vancouver centre on Thursday, June 7th at our monthly council meeting.

Our presenter was from the Afghanistan Astronomical Association. Since the Year of the Astronomer in 2009, Mr. Bakhshi and other like minded amateur astronomers have been trying to bring astronomy to the children of Afghanistan in hopes of expanding their uni-

verse and make them less susceptible to the narrow view of the universe that radical factions within their country try to imbed in their minds. His hope is that a true view of the universe will make them less pliable to radicalizing.

He received funding in 2009 from the American Embassy in Afghanistan which enabled them to buy some telescopes and publish a book in Farsi and Persian. It needed images and cartoons as well, as the illiteracy rate of Afghan children is running at around 90%.

For his efforts, Mr. Bakhshi is

now a refugee. The Taliban have put out a kill order upon him so he can no longer carry out his work in person. Yet from his temporary exile he is hoping to raise funds or find help in publishing more astronomy books that fit within the limitations of the populations of Afghanistan. We here support these efforts and hope you too can make the time to better inform yourselves about astronomy in Afghanistan.

Council has posted a video on our website which address and illustrates some of the issues in this article. ★

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of sight.

The nebula holds about 0.13 solar masses of matter, including hydrogen, helium, nitrogen, oxygen, and sulphur; all with a density of less than 100 particles per cubic centimetre. Its outer radius is around 0.91 ly (0.28 pc) and it is expanding with velocities in the range of 27–39 km/s into the surrounding interstellar medium.

The 14th magnitude central star has since reached the turning point of its evolution where it condenses to form a white dwarf. It has 55–60% of the Sun's mass, 41–148 times the brightness of the Sun, and an effective temperature of 123,000 K. The star has been successfully resolved by the Spitzer Space Telescope as a point source



The Owl Nebula (M97) – unprocessed image via the Slooh.com telescope

that does not show the infrared excess characteristic of a circumstellar disk.

In terms of the age of the universe, this nebula is like a newborn baby. ★



Each year, the Merritt Astronomical Society hosts a large and roomy star party called Merritt Star Quest.

If you are into camping and doing “all nighter’s” under a canopy of stars, observing deep sky objects, and the occasional planet, then this event is right up your alley!

The event runs for a period of 3 days and 8 nights—making it possible for those who can’t make it for the entire event to at least have the weekends.

This is not a RASC Vancouver event but many RASC members attend annually as the event is open to the public-at-large. We support our friends and fellow astronomy enthusiasts at the Merritt Astronomical Society.

For more information, please go to www.merrittastronomical.com. At the website, you will find driving directions, suggestions of what to pack, registration and fee details, and an information video. The website also details the Star Party’s rules

of etiquette, lighting bans, as well as camping guidelines that all must be observed. Please educate yourself before you go by reading through the website.

Also, please understand that although this star party is open to the public-at-large, the event is not a public outreach event but instead for the serious observer. If you do not own a telescope or observing binoculars, then this event is not for you. ★

Public Outreach



Photos from our outreach events at Lena Shaw Elementary School and Camp Capilano Brownies