

NOVA

NEWSLETTER OF THE VANCOUVER CENTRE RASC
VOLUME 2018 ISSUE 5 SEPTEMBER/OCTOBER 2018



Deja Vu (Perseids Wiped Out Again)

by J. Karl Miller

As is a tradition by now, our local centre of the Royal Astronomical Society of Canada helps out at Aldergrove Regional Park for viewing the Perseids every year. It is a big event for the Parks Board and the public, and matches the Royal Astronomical Society of Canada's mandate to promote an interest in astronomy and associated sciences to the public.

I wrote this last year in my blog post about viewing the Perseid meteor shower (August 13, 2017, in italics):

Aldergrove Park near Abbots-

ford is used for public viewing when the Perseid meteor shower peaks annually on August 12. The park administration sets up a tent for us (the RASC), and re-

and future). It's a rain-or-shine occasion. If it rains, telescopes are not set up outside, but may serve as exhibits inside the tent.

The Aldergrove Park administration promotes this event. This is the only time in the year at which overnight camping is allowed in the park. Many people usually attend.

This year, an unfortunate fire on a barge carrying old, recycled cars, docked

in the Fraser river on the day before this event, created a lot of smoke. This affected much of the Lower Mainland, both

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Image by Doug Montgomery

serves some space nearby to set up telescopes. Some of our members, and sometimes invited speakers, give several talks regarding astronomical events (past, present,

SEPTEMBER 13

SFU

Richard Shaw from CHIME. See Meet-up for details. Room AQ3159

SFU

OCTOBER 11

SFU

RASC President Chris Gainer and SFU grad student Sarah Savic-Kallasu. See Meet-up for details. Room AQ3159

SFU

NOVEMBER 8

SFU

Rob Thacker for St. Mary's University. See Meet-up for details. Room AQ3159

SFU

Members' Gallery

The Pleiades (M45)

by Phil Lobo

Also known as the Seven Sisters, six or more stars of its more than 1000 members are visible to the naked eye. The dust seen is probably not a remnant from the cluster's formation because of the cluster's age of 100 million years, but instead a cloud of interstellar dust the cluster is passing through. 20 x 3min exposures, Canon 1000D, 200mm f/3.9 Newtonian.



President's Message

It is hard to believe it is September already. For the kids it must feel like summer just flew past. For those of us more seasoned, it will be nice to have the air a bit cooler and the sky smokeless. What a difference a couple of weeks make. Even our dog is more eager to take me for walks.

Rather than lamenting our bad luck with Mother Nature and her fickle weather ways, I choose to look forward to a busy astronomical future for us all.

Our events chair, Hayley Miller, has been working hard with Manning Park staff to help them out with their first

by Leigh Cummings

“Dark Sky Astronomy Week-end” event which will run October 12 to October 14. Because this is a provincial park commercial event, it will not be free. We feel commercial events such as this one can be a positive move towards preserving a dark sky for future

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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

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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

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Map to Meeting Site



Our Sept-Dec 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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generations. We believe it is a worthwhile endeavour for us to encourage "Astrotourism" as an ethical goal of our public parks. Astrotourism is another form of the growing industry of Ecotourism which is giving a financial incentive to governments and businesses to preserve natural environments for the betterment of coming generations.

Hayley also helped "NASA Jim" Meyer present his "The Impossible Dream Career & Astronomy Night," held September 8th at the Summit Lodge located at the Sea to Sky Gondola in Squamish. Jim Meyer, or "NASA Jim," had a career with NASA that spanned nearly 37 years with 165 missions, including 15 manned Apollo and Skylab launches. He retired as the Lead Launch Operations Manager integrating the entire Launch and Missions

Team. Our volunteer, Jennifer Kirkey, also pitched in by taking a telescope for a viewing party that followed Jim's presentation.

On September 15th, RASC National is holding a National Star Party. We have not planned a specific event, but will take advantage of any weather window to get our members out viewing.

Speaking of RASC National, one of our guest speakers at our October meeting will be Chris Gainer, our new national President. Thanks to the hard work of our speaker chair, Scott McGillivray, we will also have Sarah Savic-Kallasu at the same meeting giving us a talk about her research work at the Canary Islands. Some of our regular attendees at Starry Nights will know Sarah from the many nights she has spent with us as an SFU volunteer.

In November, we will have

Rob Thacker from St. Mary's University in Halifax giving us a talk before he heads on to the Sunshine Coast Centre to do the same. December is still pending, however, we will have a very special Paul Sykes speaker this coming January.

We will also continue to support SFU's Starry Nights program as well as educational events throughout the Lower Mainland. Our education co-chair, Andrew Krysa, will be looking forward to helping out Scouts, Guides and schools that wish help with their astronomy programs. He will be looking to our membership for volunteers to help out with this fun and rewarding part of our agenda.

Looking forward, our observing chair, Ken Arthurs, is very enthusiastic about getting both an observing group

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Rethinking the Red Planet

by Francesca Crema

For as long as humans have roamed the Earth, we have been especially interested in another rocky sphere circling the heavens. Mars has been a source of mystery and fascination for countless generations, ever since ancient peoples wondered how a starry light could be so bright red, since storytellers associated it with tales of gods and myths, and since modern scientists continue to research ways to send astronauts there. This interest stems from how unsettlingly crimson Mars looks among the flickering stars, making it seem so ominous and powerful that the Babylonians named it after Nergal, the god of war, fire, and ruin. And of course, the name we use for it is shared with the Roman god of warfare.

More recently, however, as telescope technologies devel-

oped and science distanced itself from mythology, we became more attracted to how similar Mars is to our own planet. When astronomer Giovanni Schiaparelli pointed his telescope at it in 1877, he observed that it was rocky like Earth, and even had polar ice caps. He famously noticed a vast stretch of grooves on the surface of Mars, which he named “canali” in Italian (meaning naturally occurring “channels”) but the term was mistranslated into English as artificially-made “canals.” This mistranslation caused an uproar in both the scientific community and the general public alike—could Schiaparelli’s observations mean that intelligent life lives on the rocky Red Planet? Many famous scientists, including Nikola Tesla and Percival Lowell, believed in this possibility,

and countless works in science fiction came from this belief, from the hostile Martians in H. G. Wells’ *The War of the Worlds* to the comical Looney Tunes character, Marvin the Martian. Even while McCarthyism ran amok in 1950s America, the idea of warmongering and intelligent neighbours living on red soil hit a bit too close to home for some, fanning the flames of communist fears and adding to the public’s alien anxiety.

The fantastic idea of an advanced civilization on Mars was hit with a major blow between July 14 and July 15, 1965, when the Mariner 4 probe transmitted its first ever direct data from Mars. Instead of a lush and vibrant world, the probe and its Viking successors revealed no canals, no civilizations, and certainly no

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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-one-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

September

8 - 16 – Merritt Star Quest

October

12 - 14 – Astronomy Weekend at Manning Park

December

13 – AGM

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on the day before, when we were involved with the “Starry Night” event at Simon Fraser University’s Trottier Observatory, and at Aldergrove Park. “Perseid” day itself was cloudy, with local rain showers. Toward evening, the smoke had cleared, and some large, blue stretches appeared in the southwestern sky and drifted east to where Jupiter, Saturn, and Mars would be located at dusk. I made my way to Aldergrove Park, found our assigned area (same as last year), decided that chances were reasonable for viewing, and set up my telescope.

Our RASC Vancouver centre librarian William happened to spot Venus with his binoculars well before sunset, so he and I trained our telescopes on that brightest of our planetary siblings. I got a couple of minutes view of it, a couple of members and the public had a chance

to view it as well, and then a cloud covered Venus. That was the last view I had of it for the evening.

Well, as the weather gods would have it, it turned more cloudy just as the evening approached and eventually some rain began to fall. I packed up my telescope. There was another break in the clouds about 45 minutes later and a number of people had a chance to see both Jupiter and Saturn through a couple of our other members’ telescopes. Clouds then turned really heavy, and it started raining seriously towards 11pm.

After a number of days of wildfire smoke, which covered our area during all the preceding, sunny days, and which was finally cleared out by wind from the south-west, this was a disappointment. We are told by the park administration that fewer people than last year showed up. During the

short periods when the view was worthwhile, several dozen of them came to visit our telescopes. Attendance at the talks in the tent was fortunately much higher.

Our activities ended just before midnight; had it been clear, we would have stayed all night for the public to have a look at interesting astronomical objects—the Perseid meteors especially, of course. Well, we hope that next year’s Perseid meteor date will have a clear night sky. This is the same sentiment I expressed last year.

As I write this, the smoky sky has returned. The cause appears to be some fairly large forest fires on Vancouver Island. So the night from August 12 to 13 (which was when the actual maximum of Perseids was expected) turned out to be a bummer, too.

Maybe “deja vu” of smoky skies is turning out to be the new normal. ✱

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Martians. While these sci-fi dreams did not reflect themselves in reality, Mars has again become a target of study—this time, though, through a more scientific and practical lens. This iron-rich planet, with its weak atmosphere and recently-

discovered pockets of liquid water, is proving itself an ideal candidate for future manned missions. Through the efforts of space agencies and privately-owned companies, civilization might one day exist on Mars after all.

Although our ancestors also

held a powerful interest in Mars, our ever-evolving scientific understanding of it gives the Red Planet a new meaning and importance to humanity. Instead of being associated with blood, fear, and warfare, Mars is beginning to represent hope, innovation, and discovery. ✱

Sea of Stars

by Scott McGillivray

“My song Rocky Mountain High was banned from radio by people who had never seen or been to the Rocky Mountains, and also had never experienced the elation, celebration of life or the joy in living that one feels when he observes something as wondrous as the Perseid meteor shower on a moonless, cloudless night, when there are so many stars that you have a shadow from the starlight, and you are out camping with your friends, your best friends, and introducing them to one of nature’s most spectacular light shows for the first time.”

That’s John Denver’s 1985 statement to Congress opposing music censorship, citing his innocent 1972 song about stargazing that was misinterpreted by the FCC as a drug reference. Did you know *Rocky Mountain High* is about camping during the Perseid meteor shower? Give it another listen—you’ll love it!

I am a boat owner. Buying a boat may have been the best decision of my life. Among many memorable experiences at sea, I’ve seen some unbelievable skies while at anchor. The BC Coast has no shortage of dark sky locations. If you want a better sense of how bad terrestrial

light pollution is, spend a night on or beside the water. Have you tried walking far enough to escape city lights? You can’t walk... you must drive... and then hike... and even then... when you’re standing in the forest... have you really found the ideal dark sky? Humans love to stick lights in the ground; it’s easy to do so. We light up the night everywhere we can.

On the water, it’s not so easy. Maybe the occasional lighthouse or marker buoy, but they’re several kilometres between and easy to avoid. Water provides a simple yet effective buffer from everything human, whether it’s noise, congestion, smell, or light. You don’t have to go far on the water to find yourself alone in nature, free from civilization and the sensory contamination that comes with it. The Gulf Islands or Howe Sound are an incredible place to stargaze on the weekend, but you don’t have to go that far to find the ideal sky. Have you seen the stars from just around the corner in Deep Cove? What about our local lakes? Or tucking in beside one of the many islands in the Fraser River? With a boat, that perfect sky might be only a few minutes from the busy city streets.

Is a boat ideal for astron-

omy? Well, no. You simply can’t use a telescope from a boat. I mean, it’s a boat. It floats and it’s always moving. When someone sits down, everyone feels it. Imagine trying to use a telescope with your friends while standing on a trampoline. But for naked-eye observing and especially meteor showers, there is no better place to be. Imagine the darkest sky you have ever seen with no trees, obstructions, or people in any direction; just water and a clean 360° view of the Milky Way.

Maybe you’ve heard the phrase, *“The two best days of a boat owner’s life are the day he buys it and the day he sells it.”* I hear it all the time from people who don’t own boats. They’re like the FCC officials who censored John Denver—people who have never experienced a clear night at anchor in the Gulf Islands when the stars are so numerous and bright you can’t pick out the constellations. Nights when Andromeda is naked eye, the sky is full of satellites, and a Perseid meteor falls every ten seconds; it really is a fire in the sky. I’ve had a lot of best days and best nights on my boat, including the last five Perseid meteor showers. I’ll certainly be on the water for the next one, too. ✨

Manning Park Dark Sky Astronomy Weekend



Manning Park is hosting their first Astronomy Weekend from Friday Oct 12 to Sunday Oct.14/18. RASC Vancouver is also looking forward to being a part of this dark sky event. This event will feature some of our RASC council members who will speak and guide guests on a tour of the night sky.

The Dark Sky in Manning Park offers some of the best stargazing around. With multiple viewing locations and very limited light pollution (Bortle class 2), the views are incredible!

This event is for beginners and experts with two packages available:

LIGHTNING LAKE STARGAZER PACKAGE

\$25 per person or \$75 for the family package (2 adults and up to 2 kids under 18)

CASCADE STARGAZER PACKAGE

\$45 per person or \$135 for the family package (2 adults and up to 2 kids under 18)

These packages give you a wrist band for free entry to all events and the Cascade package includes a shuttle bus to the Cascade look-out for the Saturday night stargazing (weather permitting). Other activities include: yoga under the stars, a walking tour, and an interpretive tour. Both packages also include presentations on Beginner Astronomy 101, an Introduction to Astro-photography, and the Basics of Observational Astronomy.

Registration information and the complete schedule, including several other family-friendly activities, can be seen at:

<https://manningpark.com/manning-park-dark-sky/>

Telescope and Equipment Loaner Programme

Policies and Procedures

“Telescope(s)” in this document refers to telescopes, mounts, eye-pieces, and associated equipment, either standalone or attached to the telescope.

1. Members wishing to borrow a telescope must contact the RASC Vancouver Centre Telescope Director via email (telescopes@rasc-vancouver.com) or in person at a RASC meeting.

Members must supply: signature, picture ID, and their RASC ID number.

2. Members may borrow telescopes on a monthly basis.

Members may extend the borrowing period of a tele-

scope as long as there are no requests for said telescope from other Members.

3. Telescope pickup is by the Member as agreed, (usually at

see website for time and place).

Upon picking up the telescope, the Member and the Telescope Director will examine the telescope to ensure it is in good working order.



The Member and the Telescope Director (or RASC official) must sign the Loaner Program Rental Form before the Member takes away the telescope.

Telescopes are to be returned by the Member to the storage room of the Trottier Observatory following the Member's Meeting held on the 2nd Thursday of every month.

Upon a Member returning the telescope, the

Telescope Director (or RASC official) will note the telescope as returned on the Loaner Program Rental Form. *

the storage room of the Trottier Observatory at Simon Fraser University following the RASC Vancouver Member's Meeting;

Observing and Imaging at the Trottier Observatory by Ken Arthurs

Selected nights at the SFU Trottier Observatory are currently allocated, by the kind auspices of Howard Trottier, for the use of the telescope by members to observe and image the night sky.

We would like to offer any members who may be interested in astrophotography

or similar scientific pursuits (or simply observing) to schedule sessions using the telescope hosted by myself or another RASC council member.

To be added to an email list notifying users of available time, please email me (please include your name and the

target you are interested in studying). Whenever there is time available, I will schedule a session, send out an email to interested members and ensure that the session is hosted.

Email: telescopes@rasc-vancouver.com *

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and an astrophotography group active, centred around the use of the Trottier Observatory. His goal is to not let an available clear night go to waste at the observatory. He has arranged to have every Tuesday night reserved for RASC members (who get training and have appropriate supervision) partake in projects they propose or help out with ongoing projects at

the observatory. I invite our membership to get in contact with Ken A. and get involved. Here is an opportunity to really get into some citizen science.

In closing, my thoughts are that astronomy is the science of understanding the Universe we live in. It is a science that any person can actually contribute to if they so wish. Even as a casual observer, it is healthy to have a realistic

perspective of our place in the big picture. It is also important to realize we are all citizens of the Universe and I personally want our organization to reflect that. I call on all our members to help our centre's council with ideas that will help us be attractive to all members of our community.

Here is hoping for lots of clear nights over this coming fall and winter. ✨

Public Outreach

Making the best of the weather at the Perseid observing event at Aldergrove Regional Park (right). Image by Doug Montgomery.



Bill Burnyeat doing his usual summer outreach at one of the many provincial parks in BC (left).

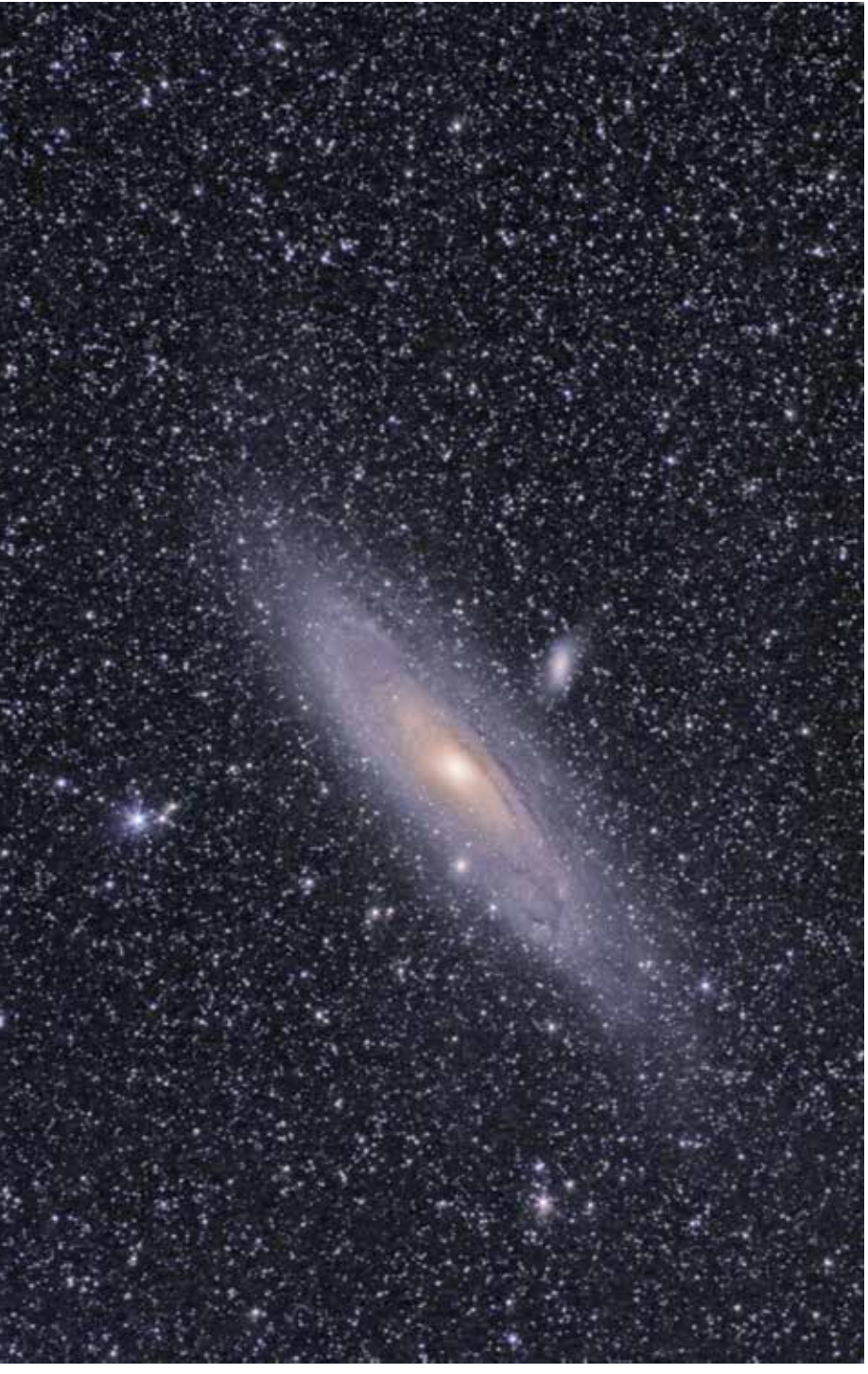
Members' Gallery



Milky Way

by Gordon Farrell

Taken from Qualicum Beach over the Labour Day weekend, this heavily-processed image was created by stacking two images (as evident from the broken satellite trail at the upper right and the double images of the trees at the bottom). The source images were 25-second exposures shot at ISO 6400 at f/3.5 on a Canon 5D Mark IV.



Andromeda Galaxy (M31)

by Phil Lobo

Distance 2.5 million light years. Satellite galaxies M110 (upper left) and M32 (right of the core, over the disk of M31) can be seen. M31 is visible with the naked eye under dark skies, and easily visible in binoculars. 20 x 3min exposures, Canon 1000D, 200mm lens at f/5.