

NOVA

NEWSLETTER OF THE VANCOUVER CENTRE RASC
VOLUME 2018 ISSUE 6 NOVEMBER DECEMBER 2018



2018 Merritt Star Quest

by Suzanna Nagy, Membership Dir., RASC Vancouver and VP, Merritt Astronomical Soc.

The annual Merritt Star Quest, as hosted by the Merritt Astronomical Society, was held during

the week of September 8 to 15. Unfortunately, our typical nice September didn't materialize for that week and we suffered through many days of cloud and rain. Out of the six nights I attended, I only observed twice. Having said that though, I still had a really good time. There was a communal

tent with propane-fuelled fire-pit (thanks to Elliott Melan and his lovely wife, Elaine) that many of us gathered around to warm up as well as socialize. I have to say that

this was the first year that I was able to get to know so many regular attendees of MSQ and I think it

we all gathered together instead.

A new addition to MSQ were daily activities hosted by the Di-

rectors. There was a guided nature walk, an evening of apple pie, an evening of live guitar music with sing-along, as well as three lectures. The two day-time lectures were presented by Ken Hewitt-White and Lee Johnson. The one evening lecture was presented by Jim Kanester. The

activities were well-received and on the final day many attendees requested that a daily activity be repeated next year.

continued on page 5



was because of that fire-pit. Normally, on clear nights, I would be fairly solitary in the evening, communing with the stars and my telescope. But with the bad weather,

NOVEMBER 8

SFU

Dr. Christa Van Laerhoven of UBC and OSIRIS-REx Ambassador presents "Finding Pluto's Compatriots." Room AQ 3159

SFU

DECEMBER 13

SFU

Our Annual General Meeting. Room AQ 3159.

SFU

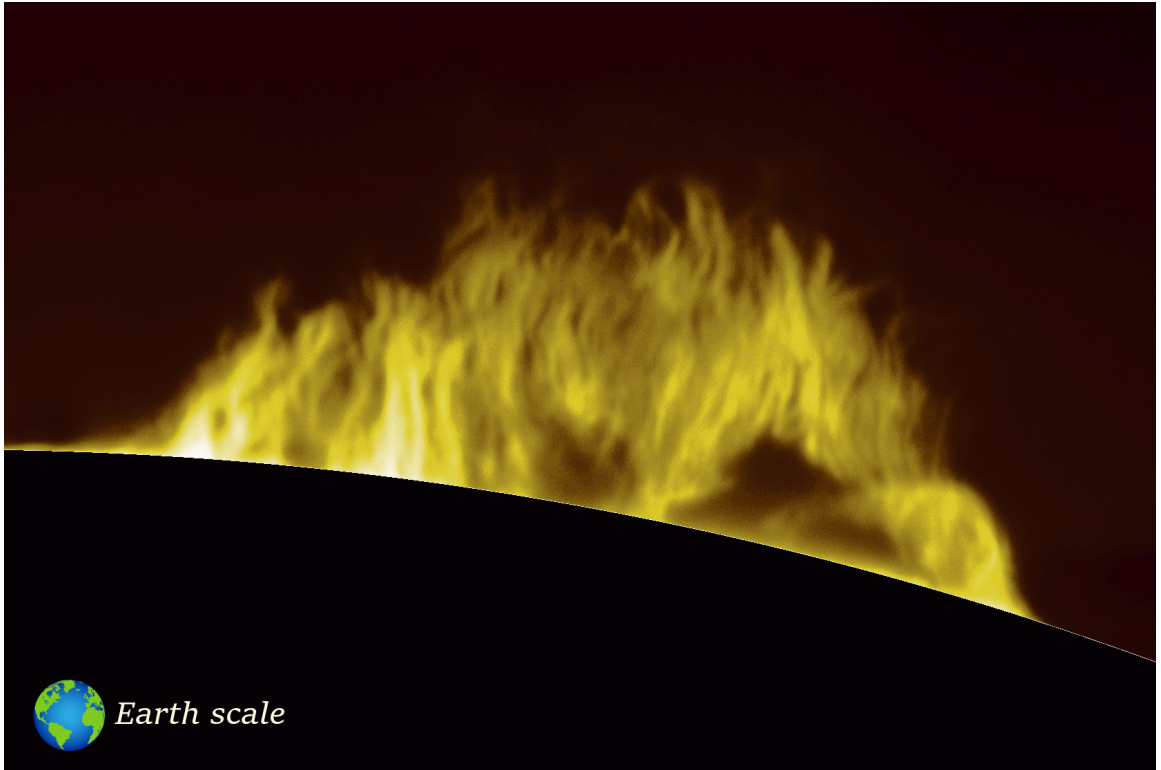
JANUARY 10

SFU

Speaker and room TBA. See Meetup for details.

SFU

Members' Gallery



Earth scale

Solar Prominence

by Ken Jackson

The sun was quiet during our solar observing session at Manning Park with no sunspots and only a few tiny prominences visible. Two days later this showed up! Taken with a Skywatcher ED100 Pro, DayStar Quark H-alpha filter, and ZWO ASI 178mm camera on Oct 16th, 2018 from Coquitlam, BC.

Getting to Know the Sky

At our public star parties, a number of people have never seen the impressive objects we usually show through a telescope and ask about how, and at what cost, they could acquire a telescope to look at the stars, planets, the Moon, and other objects in the sky.

My long-time comeback to this question for people who are new to looking at the sky through one of our

members' or SFU's Trottier Observatory's telescopes are questions of my own. I ask whether they own a pair of binoculars. If the answer is yes, then the my next question is: have you ever looked at stars through them? Many people have never even thought of doing this. To those people who have done it, I put this question: would you know where to look for the Andromeda galaxy (or

some other object in the sky)? The answer many times is, "no."

With the apps available on computers, tablets, smartphones, etc., many people compare the sky portrayed on these devices with the sky visible at the time. That's a legitimate approach, but, in my opinion, if one comes to rely on these devices, one usually does not

continued on page 7

President's Message

Once upon a time, a couple of middle-aged astronomers were sitting around their campsite at the Merritt Star Quest “chewing the fat” about our centre and its future. We both lamented the lack of young people interested in astronomy and how, if we didn’t change things around, we were destined to become a “white haired old man’s club” and eventually be-

come extinct. That seemed like awful gloomy talk, but on that day it sort of matched the weather. We agreed that we, as a club, had to improve our effort in attracting the younger generations.

When Dr. Howard Trottier of Simon Fraser University came on council, first as secretary, then vice president and eventually president,

our club gained an opportunity to become more involved with Howard’s astronomy outreach projects at SFU. Leading up to the Year of Astronomy in 2009, our members were volunteering to help out with his Starry Nights program which also led to some of us helping out with his astronomy workshops for schools and youth organiza-

continued on page 4

by Leigh Cummings

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 Trottier 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
Vice-President Gordon Farrell
vp@rasc-vancouver.com
Secretary Olivier Eymere
secretary@rasc-vancouver.com
Treasurer Phil Lobo
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 Ken Arthurs
telescopes@rasc-vancouver.com
Observing Robert Conrad, Ken Arthurs
observing@rasc-vancouver.com
Membership Suzanna Nagy, Francesca Crema
membership@rasc-vancouver.com
Events Coord. Hayley Miller
events@rasc-vancouver.com
Education Robert Conrad, Andrew Krysa, Ron Jerome
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 Suzanna Nagy
At Large Howard Trottier, Bill Burnyeat,

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 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).

continued from page 3
tions. It is hard to quantify the resulting boost in youth membership that this resulted in, but it certainly must have had some influence.

Sometimes events happen which seem terrible at the time but later turn out to have unexpected positive side effects. One such event happened at the beginning of 2012 when RASC Vancouver Centre decided to leave the Space Centre in Kitsilano due to the sudden increase in pricing the City of Vancouver wished to impose on us. For close to a year, we became gypsies wandering from venue to venue, setting up camp wherever we could for free. The only anchor we had was being able to hold our monthly council meetings in the Physics Dept. of SFU, thanks to Howard. It was difficult for our members to find our nomadic monthly general meetings and we lost some of our long-term members in Vancouver as a result.

Howard being president was instrumental in finding us a new, more permanent home at SFU for our monthly member meetings and spe-

cial talks. Later, this became a more formalized agreement that included us helping SFU out with their outreach programs at the Trottier Observatory and Studio, and SFU supporting our programs at the Trottier Observatory and Astronomy Day. All in all, we have a good symbiotic relationship that has continued to benefit both parties.

I believe that our involvement with SFU has greatly contributed to our success in attracting a much more diverse population of members that more accurately resembles the population of the Metro Vancouver area. Another thing to be proud of is that our centre now has the highest percentage of youth members of any centre across Canada. In fact RASC National's new professional Youth Outreach Coordinator (Jenna Hinds) has contacted us to find out what we are doing so right. She wants to be able to advise other centres about which facets of their programs they can improve in order to attract more young people.

To be honest, I think we owe part of our success to the luck of finding a

home at SFU. Without the exposure to youth that we get by association here, we might not have done quite so well. In addition, we also have to give our centre credit in making ourselves available to the public through all the events we attend, the workshops we put on for schools and youth groups, as well as our volunteers' efforts to make astronomy fun and available to young people. I think the stars have always stirred an interest in people of all ages. If we nurture the curiosity of the young minds, we will find some that will want the deeper involvement that our organization offers. When young members also bring their parents along, these adults sometimes get their childhood curiosity re-ignited as well.

I applaud the efforts of all our volunteers including our council members who do the organizing and planning that make these events and workshops happen. I feel confident that our centre's future is more secure because of their efforts. I invite all our members to volunteer and join the fun and rewards that come with it. ★

continued from page 1

On a sadder note, on the Friday evening, a memorial was held for Paul Greenhalgh, who passed away in 2017. Paul was a founding member of the MSQ and at the memorial many attendees shared

their memories and many funny stories. Paul's family drove up for the occasion, bringing some of his grandchildren to the event. The crowd gathered around the fire-pit shared a few tears but actually a lot more laughter. It was a fitting

way to remember Paul. He is sorely missed!

MSQ 2019 will be held on the last week of August, ending on the Labour Day long weekend. I hope there will be no smoke and clearer skies. ✨



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

December
13 – AGM

Manning Park Astronomy Weekend

by Hayley Miller

The RASC Vancouver Centre is very pleased to share that on Oct 12th to 14th, 2018 we participated in the first “Dark Sky Astronomy Weekend” at Manning Park Resort in beautiful British Columbia. And we are happy to report it was a HUGE success!

The event was hosted by Manning Park Resort and supported by our centre, RASC Vancouver, as well as The Fraser Valley Regional Library and Advantage Hope, an economic development and tourism agency in Hope, BC.

Manning Park Resort, located in the heart of the Cascade Mountains, is a recreational paradise, offering outdoor and indoor activities all year round. From hikes, ski lifts, kayaking, camping, fishing to an indoor pool, delicious food and drinks at their restaurant/bar and a friendly and experienced staff... there is always something to do at Manning Park Resort. We can now add Astronomy to this list.

Last spring, Manning Park Resort contacted RASC because they had noticed many of their guests had been asking if they had a telescope to observe the stars, which they did not. They realized there was a strong interest in their dark skies so they contacted our Vancouver Center and asked if we would be interested in planning an event to celebrate and take advantage

of their beautiful night sky. With RASC’s knowledge of astronomy and the Cascade’s world class lookout, we, of course, jumped at the opportunity.

The first event to kickoff the weekend was “Astronomy 101.” This educational talk was presented by our Observing Chair, Robert Conrad. Robert shared his knowledge and stressed the importance of planning/strategizing before going out to observe. Stellarium (online) and “old school” books with sky maps are some of the great tools Robert recommends to star hop and locate asteroids.

Following Robert’s talk, the guests headed to Windy Joe Field (a dark sky area close to the lodge) where telescopes were set up. We all felt fortunate that evening that the sky was clear and there was lots to see in the sky. Manning Park Resort made every effort to accommodate our dark sky requests by dimly lighting the path, and graciously offered to serve hot cocoa and provide a warming area. Although we could barely see the faces of the guests in the dark, we could hear their excitement, many of them having their first observing experience. Some enthusiastic guests even began charting and star hopping. The itinerary the next day kept families with kids busy. Activities such as arts and crafts included: solar toss,

learning phases of the moon with Oreo cookies, star mobiles and alien masks. The Spotify “SPACE” playlist for adults and kids as well as the RASC visuals such as banners and astronomy posters really contributed to the overall feeling that we were all there for the love of SPACE!

RASC’s Webmaster Ken Jackson’s Astrophotography session on Saturday afternoon was also well attended. In fact, stunning images of the Milky Way that night are still being shared on social media. Later that afternoon, Robert Conrad’s Advanced Astronomy workshop was also well attended and helped to better prepare those guests going up to Cascade Lookout that evening, which turned out to be another perfect night! Clear skies, mild weather, and at least a dozen telescopes! It was even better than we could have imagined.

Other guests drove to Lightning Lake, a few minutes from the resort, to listen to stories about the stars as well as observing with other RASC volunteers that brought their telescopes. Sunday’s solar viewing at Lightning Lake was also a big hit and I personally didn’t want to leave! We all agreed it was a great weekend—one I will never forget!

We look forward to holding the event next year with dates tentatively set for October 18-20, 2019. ★

continued from page 2

“learn” the sky.

I grew up at a time when these devices were “science fiction.” Having had an interest in astronomy since I was eight years old, knowing the sky is an “innate” feeling for me, at least as far as the northern hemisphere is concerned. I’ve not spent much time closer to the equator, therefore I don’t have the same familiarity with the southern sky.

In my younger years, I did some serious astronomy, for instance submitting observations to the AAVSO (American Association of Variable Star Observers) regarding variable stars, Zürich sunspot numbers, occultation timing, and other things. These activities, and many others, are now done by both amateur and professional astronomers (the two categories really overlap nowadays, since the technologies available are now highly sophisticated and not very expensive) and generate very precise and detailed results.

At this time in my life, my greatest enjoyment comes from our public star parties. I get a kick out of comments like “wow,” “cool,” “amazing” when people are looking through one of my telescopes at the sky. In particular, I feel very happy when a young person comes up with these comments.

Adults who are “newly exposed” are equally amazed. The objects which usually are the source of this are the “jewels” of the sky: Venus and its phases, Jupiter and its moons, Saturn’s rings, our Moon’s craters, open and globular star clusters, etc.

Here are the recommendations I usually make:

(1) When outdoors, preferably under a dark sky, use only your eyes to get to know the sky and constellations

using one of the star finders we hand out freely on various occasions, or find a printed or on-line star atlas. Familiarize yourself with the constellations and their annual positions at various times of the year. Dig deeper, and become knowledgeable about the Earth’s orbit and how that relates to these times of visibility. Try to find objects which our unaided eyes can readily perceive (Pleiades, Hyades, Milky Way, compact constellations, etc.). If you feel that you’d like to see these targets in more detail, then

(2) use your binoculars to find these objects. If you are a young person, 7x50 binoculars are ideal. Your age and personal preferences have an effect on what may be your perfect binoculars. Almost all binoculars will show far more detail in the night sky than the “naked” human eye. Using binoculars will “train” you to find sky objects. At first you may spend some time to succeed, but you quite quickly become better at it.

Many very descriptive dissertations have been written about the use of binoculars in astronomy. Even advanced astronomers, at least those who are involved in visual observing, have their favourite binoculars on hand when observing. Personally, when I’m setting up one of my telescopes, I always have binoculars with me. They are very helpful in locating objects for which I want to use the telescope. Once you have become familiar with their use and characteristics, and if you are looking for even more detail, a telescope may be your next “step up.”

(3) Before you buy a telescope, understand the basic requirements. Besides the size of your contemplated purchase, understand differences between the various types. This is a much-

discussed and written-about subject. The best way to find out is to attend star parties, such as the ones run by the RASC, or SFU’s Trottier Observatory, because you will usually meet people who are using different types of telescopes. You will also become aware of the fact that purchasing a telescope entails having to buy a sturdy, and accurately-manufactured telescope mount. The best telescope is next to useless unless it can be held steady and does not shake with every little breeze. The matching of telescope to its support is another important topic.

Computerized telescopes are a helpful addition to the range of telescopes available. Again, unless you have learned how to find objects in the sky as described in (1), (2), and (3), you likely won’t get to know the sky in the detail necessary. Getting to know the sky “in depth” is best done by learning to point a telescope “manually.”

If you become a member of the RASC, you’ll have access to many benefits. As a member, you can borrow one of the RASC’s library books, and/or a loaner telescope for a limited time. You also receive several publications, chief of which is the RASC’s annually-published *Observer’s Handbook*. It contains a wealth of data, among which you’ll find detailed information about binoculars, telescopes, human eyes, and upcoming monthly events (eclipses, occultations, planetary positions—a plethora of facts and discoveries). The *Handbook* is used by professional and amateur astronomers world-wide. The RASC also owns the magazine *Skynews*, and publishes the RASC Bulletin and local RASC centre newsletters. All these are included in the membership.

Try it—I think you’ll like it. ★



M81 and M82

by Phil Lobo

At a relatively close distance of 12 MLy, M81 (right) and M82 (left) appear relatively large in telescopes compared to most galaxies. M81 is the largest galaxy in its local group. M82 is undergoing rapid formation of stars, or starburst activity, probably triggered by close interactions with M81. M81 and M82 are separated by about 250,000 LY, slightly more than the distance between the Magellanic Clouds and the Milky Way. Both M81 and M82 are visible in binoculars under dark skies. 25 x 3min exposures, Canon 1000D, 200mm f/3.9 Newtonian.