

# SKYNEWS



Photo by David Lee

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**Next Monthly Meeting**  
Wed October 10th 2018  
Room A104  
Bob Wright Centre at UVic

[www.victoria.rasc.ca](http://www.victoria.rasc.ca)

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## President's Report

by *Chris Purse*

I hope everyone had an enjoyable summer and had many opportunities to enjoy the night sky.

I am pleased to announce that our very own Dr. Chris Gainor was elected president of the Royal Astronomical Society of Canada at the General Assembly in Calgary. It has been 40 years since another Victoria Centre member, Dr. Alan Batten, was the national president. Please join me in congratulating Chris on his election.

The Victoria Centre had a great summer of outreach events in 2018. Thank you to everyone who organized and participated. We had another successful season of summer star parties at the Dominion Astrophysical Observatory; there were a total of 19 well-attended Saturday evenings offered. A group of RASCals were at the Saanich Strawberry Festival with solar viewing in July. For the second year, members had their telescopes at the Fort Rodd Hill Star Gaze in August. There was an event on Pender Island on the same evening. And, there was the annual participation at the Saanich Fair over the Labour Day weekend. Some members also participated in a number of special events such as instruction and observing offered to guides and cadets. It was a busy and rewarding summer!

It was unfortunate that the Fort Rodd and Pender Island events coincided with the worst viewing conditions that I have experienced. In looking at Saturn, it was a fuzzy football-shaped object instead of its normally stunning planet with a fabulous ring. As I recall, that was one of the first evenings when forest fire smoke was in the skies above us. That really had a major impact and I am concerned that an increase in the severity of our forest fire seasons will make smoke a regular part of our summer.

With the arrival of September, we return to our normal schedule of weekly Astro Cafés starting on Monday, September 10 and monthly meetings resuming on Wednesday, September 12. As a reminder, we will be voting on our revised bylaws at the September 12 meeting.

We have another major event in September this year and that is **our annual star party**. It is taking place at our new venue on the grounds of St. Stephen's Church in Central Saanich. That takes place September 7 to 9 and I hope many members are able to attend. Please see the website for the schedule.

Save the date for our Annual General Meeting on the evening of Saturday, November 17. Evening festivities include a dinner, speaker, annual awards, and election of council. We will be posting information about the meal options and cost once that is finalized.

We are now accepting nominations for the annual awards. In particular, we are seeking nominations for the Newton-Ball Award. Please see the website for details of the award and how to nominate a member to receive the award.

We will be looking for members to join the council this year. It has been a great experience for me to become part of the council and I encourage everyone, even if you've just joined, to consider putting your name forward. Sherry, our past president, will be coordinating the nomination process so please contact her at [pastpres@victoria.rasc.ca](mailto:pastpres@victoria.rasc.ca) if you would like more information and to put a name forward.



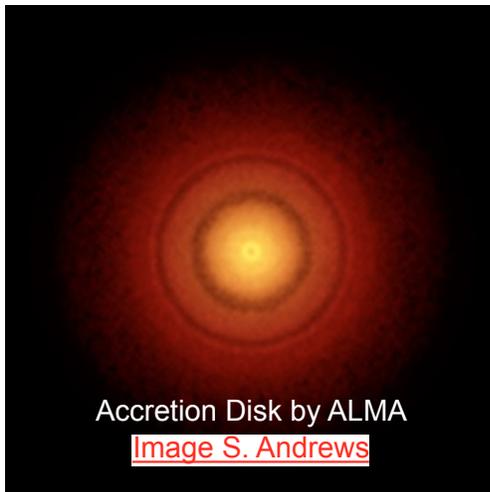
New RASC President Chris Gainor receiving Newton-Ball Award

**September Meeting Presentation:  
Planets Under Construction: How to  
Study a Million-Year Process.**

**by Dr. Nienke van der Marel  
Wednesday September 12th, 2018 at 7:30  
PM Room A104 Bob Wright Centre UVic**

Exoplanets are everywhere! In the last 25 years, thousands of exoplanets have been found throughout the Milky Way. But if they are so common, why is it that we still don't know how they are formed? With the ALMA telescope we can now finally zoom into the birth cradles of planets: dusty disks around young stars. The spectacular images have given us new insights, but also raised many more questions regarding the process of planet formation.

**Dr. Nienke van der Marel** is an NRC postdoctoral research fellow at the Herzberg institute. She received her PhD in 2015 at Leiden University in the Netherlands, her country of birth. After that, she spent two years at the University of Hawaii as Parrent research fellow, before joining the Herzberg institute in November last year.



Accretion Disk by ALMA  
[Image S. Andrews](#)

**Upcoming Speakers**

**Wednesday October 10th 2018**  
Dr Reka Winslow *Planetary Magnetism*

**Saturday November 17th 2018**  
AGM Speaker To Be Determined

**Wednesday December 12th 2018**  
Dr. Doug Johnstone

**ASTRONOMY  
CAFE**



Our weekly **Astronomy Cafe** is an excellent, informal, way to meet us. New comers are especially encouraged. Click the link for location: <http://victoria.rasc.ca/events/astro-cafe/>  
Fairfield Community Centre - 1330  
Fairfield Rd. Victoria.  
**Every Monday at 7:30pm.**

Contact Reg for further details:  
[vp@victoria.rasc.ca](mailto:vp@victoria.rasc.ca)



**Email Lists**

**Observer / CU Volunteers /  
Members**

Contact Chris Purse to subscribe  
[membership@victoria.rasc.ca](mailto:membership@victoria.rasc.ca)



**New Observers Group**

Hosted by Sid Sidhu - 1642 Davies  
Road, Highlands. Call 250.391-0540  
for information and directions.



**Cattle Point observing** in Victoria's  
own Urban Dark Sky Park.  
Click the link for the date and time of  
the next scheduled session  
<http://victoria.rasc.ca/events/rascals-cattle-point/>



**Victoria Centre Observatory:  
Saturday Evenings**  
Open to those on the **Active  
Observers list only**  
Weather permitting.



**UVic 32 Inch Telescope**  
RASC Victoria Centre Sessions  
will resume in October.

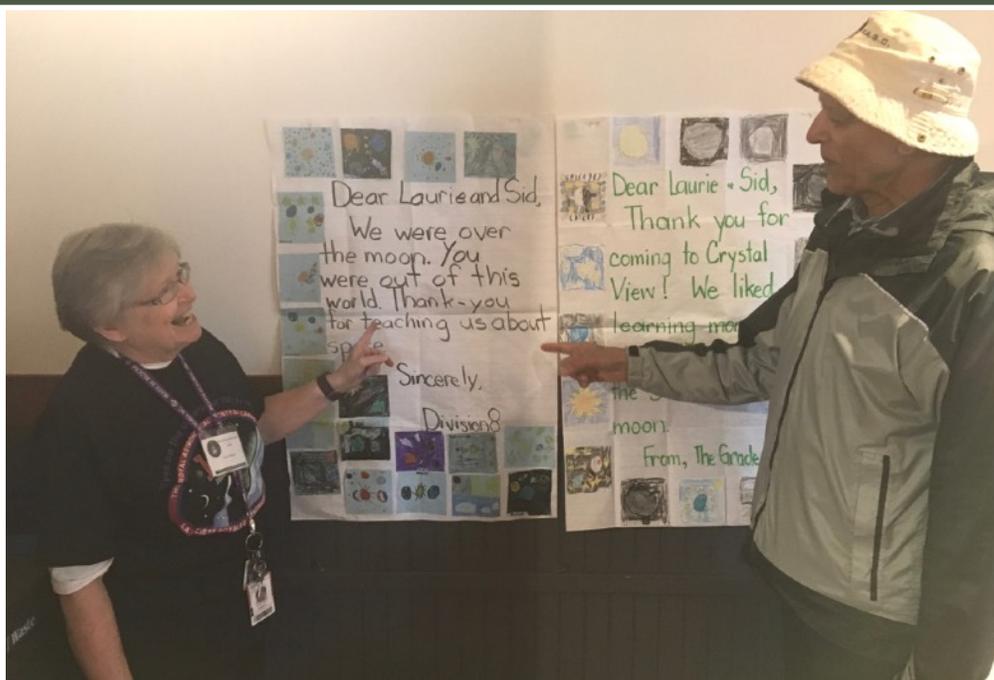
**Membership Report September 2018**

Total membership is currently **275**. There are 18 members in the grace period which means their membership has expired in the past 2 months. Please contact Chris Purse ([membership@victoria.rasc.ca](mailto:membership@victoria.rasc.ca)) if you would like to check the status of your membership.

## Back To School

By Reg Dunkley

Now that the DAO Summer Star Party Marathon has ended for the season you would think that now is the time to kick back and relax. That is definitely not the case for Sid Sidhu and Lauri Roche. They receive great joy and satisfaction by introducing the wonders of the Universe to the next generation and are poised to launch another season of educational outreach this month.



Lauri and Sid enjoy the many notes of gratitude and works of art that were inspired by their talks.

Sid and Lauri deliver presentations tailored for the grade 1, grade 4 and grade 6 Astronomy curricula in Victoria area elementary schools. They are in hot demand and during the last school year they visited over 90 classrooms! On some occasions they conducted night time viewing sessions as well.

How long has Sid been doing this? His answer is artfully vague but others suggest that he has been sharing his joy of Astronomy in classrooms

for over two decades! Lauri joined the cause when she retired from teaching school over ten years ago. Many other RASCals have also assisted them in their mission over the years.

If you share a commitment for educational outreach and have classroom management experience you may want to let Sid and Lauri know. Your visit to the classroom may ignite a life long interest in Astronomy.



Sid Sidhu introduces the Milky Way to a Grade 4/5 class at Sir James Douglas Elementary School.

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## Misfits Crash DAO Summer Star Party

By Reg Dunkley

As I rounded the corner of the Centre of the Universe I knew something was different. I was expecting to see an array of RASC telescopes in preparation for the July 21st DAO Summer Star Party. Instead I encountered a group of musicians clothed in black and topped with tin foil hats. It was surreal. Although they were cordoned off by police tape this was no crime scene. They were busy tuning up for a performance of the *Zodiac Misfits*; a play which highlighted the emotional challenges of members of the Zodiac. This work was written by Jena Mailloux and directed by Leah McGraw. Many of the cast were former members of UVic's Phoenix Theatre. The initial act was performed at the base of the Plaskett Dome and then the audience followed the cast to the patio area by the entrance of the Centre of the Universe for the remainder of the play. The wonderful acting of the cast and the jazzy vibe of the band contributed to a very enjoyable show.

This drama was a first for a DAO Summer Star Party. During the 18 other Saturday night parties this year a series of lectures, coordinated by David Lee, were delivered in the Centre of the Universe auditorium. In addition to the talks attendees were treated to tours of the Plaskett Dome, Planetarium shows, Virtual Reality trips aboard the International Space Station and ... weather permitting, tours of the night sky courtesy of the RASC Victoria Centre members who generously shared their knowledge, enthusiasm and telescopes.

This extraordinary astronomical outreach program was made possible by the remarkable volunteer contribution of RASC and the Friends of the DAO. Security services on the hill were funded by NRC Herzberg. Between late April and Labour Day over 3000 people attended the Star Parties. Tickets were usually



Photo by David Lee

### Alien Musicians Invade DAO Parking Lot

snapped up well in advance.

This year visitors were treated to a spectacular parade of the Planets. Venus, Jupiter, Saturn and an unusually close Mars were popular targets for the RASC telescopes. Meanwhile, if conditions were favourable, the Plaskett telescope showcased deep sky objects following the scheduled tours.

An enormous thanks to all the volunteers who made this season of astronomical outreach such an outstanding success.



Photo by David Lee

### Zodiac Misfits Perform Beside The 16 Inch Dome

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## Under the Middle Dome

### By Reg Dunkley

The **1.83 m (73 inch) Plaskett** Telescope received much fanfare during its centennial celebration this Spring. It is housed in the largest and eastern most dome on Observatory Hill. The telescopes in the two other domes of the Dominion Astrophysical Observatory are now in their fifties and also warrant some attention.

The **1.22 m (48 inch) McKellar** Telescope is located in the western-most dome. Built by Grubb Parsons in the UK, it went into operation in 1962. It's claim to fame is the exotic spectrograph which is located in separate room. It has a very high resolution which enables detailed analysis of stellar spectra and precise measurements of radial velocities. For over a decade it has had a robotic capacity which permits remote operation.

The **0.41 m (16 inch) Cassegrain** telescope is located in the middle dome which is appended to the Centre of the Universe. It's primary role these days is outreach and it leaps into action during Summer Star Parties. It does however have **an interesting past**.

The telescope was acquired in the mid sixties to enable site testing for the proposed Queen Elizabeth II telescope on Mount Kobau. It was situated on a long ridge at an elevation of 1860 m (6100 ft) . Built by Boller and Chivens, the mirrors were figured to a high precision of 1/27th of a wavelength. This research grade Cassegrain reflector has a focal ratio of f18 and focal length of 7315 mm. Click [here](#) to obtain the site evaluation report.

During the summer months the 16 inch was mainly used for photoelectric photometry. During the remainder of the year it was used for various photographic programs. Upon the closure of Mt Kobau the telescope and dome were relocated to the DAO on the site now occupied by the Victoria Centre Observatory. When the Centre of the Universe outreach building was opened in 2001 the dome and telescope were then integrated into that facility. A beautiful spiral ramp-way now delivers Star

Party attendees to the eyepiece and allows them to savour the raw starlight.

Past Victoria Centre President Sherry Buttnor began using the 16 inch scope in an outreach capacity in 1988. So this instrument has enabled the general public to enjoy the treasures of the night sky for over 3 decades! The scope is usually paired with a 55mm Erfle eyepiece which provides a magnification of 133. Despite wildfire smoke, Star Party attendees this Summer have often been rewarded with crisp glimpses of Jupiter and Saturn as well as stunning views of jagged Lunar mountain ranges and craters.

The 16 inch telescope captured it's **most sensational photograph** on the evening of April 13th 1970. During the Apollo missions NASA used radar to measure the radial position the spacecraft precisely. The transverse or angular position, however, was more challenging to determine. In order to refine the accuracy of the Apollo trajectories, NASA encouraged astronomers to photograph the spacecraft. NASA calculated an array of coordinates for the space craft that were customized for specific observatories including Mount Kobau. That evening Frank Younger and Ernie Pfannenschmidt used the 16 Inch to take a number of exposures along the spacecraft path. It wasn't until they were developing the glass plates that they learned of the explosion aboard Apollo 13.

When they examined the developed plates they were looking for a faint 13th magnitude dot in the star field. Instead they found a faint fuzzy that had the shape and size of a globular cluster. They soon realized that what they had captured was the cloud of oxygen gas that had expanded from the explosion. The angular diameter of the cloud was 37 arc seconds. Apollo 13 was 322,000 km away at the time of the explosion and the cloud of gas had expanded to 60 km by the time the photo was taken. The Mount Kobau team captured the best image of this gas cloud. Bill Keel has developed a wonderful [web site](#) devoted to the TelescopeTracking of the Apollo Lunar Missions and pays considerable attention to the Mount Kobau success.

## THE BABY OF THE FAMILY



### 16-inch Cassegrain professional reflecting telescope

There is a vast difference between a scaled-up amateur telescope and a small-aperture professional instrument. Boller & Chivens' fine 16-inch reflector is based on the identical design concept used in the 24-inch reflector. It is fabricated and assembled with the same care and craftsmanship as our larger telescopes. The mount, optics, controls and readouts are subjected to the same tests as on the larger telescopes.

Extremely heavy professional accessory instruments up to three feet long may be accommodated, due to the unusually rugged precision mount and drive. Full instrumentation, variable right-ascension and declination drive rates, Ritchey-Chrétien optics, and computer interface are but a few of the optional features available.

Boller & Chivens would like to examine your requirements for any professional instrumentation — large or small.



Boller & Chivens Division — where precision is a way of life.

**PERKIN-ELMER**

916 MERIDIAN AVENUE • SOUTH PASADENA, CALIFORNIA

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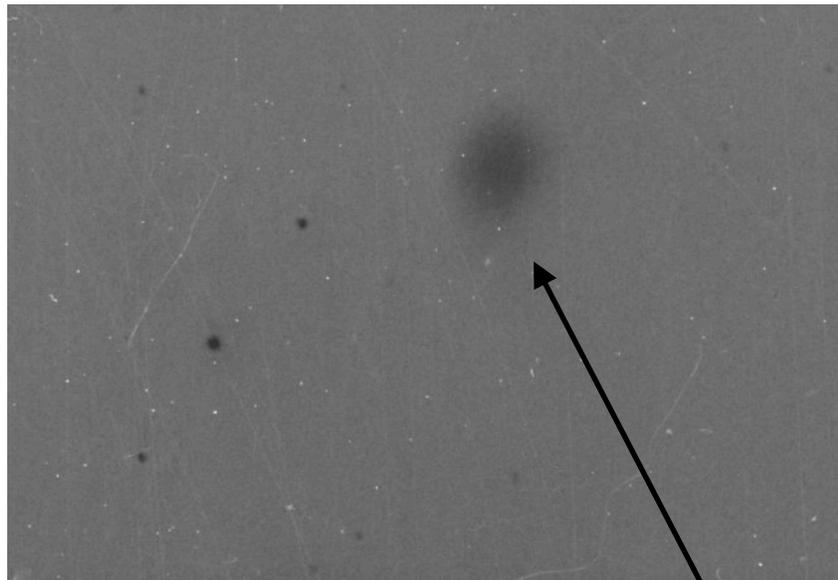
In a search for an image of the Boller and Chivens 16 Inch telescope I found the above [advertisement](#). At least 17 of these 16 inch telescopes were installed in professional observatories. In 1965 Boller and Chivens was acquired by Perkin-Elmer ... the firm that made the Hubble Space Telescope mirror. But that is another [story!](#)

During a chance encounter with Frank Younger by the pier of the 16 Inch we revisited Mount Kobau's role in the Apollo 13 adventure and Frank kindly sent me his image of the glass plate that captured this historic event.

The world held it's breath as the Apollo 13 drama unfolded. The Ron Howard movie, *Apollo 13* was made in 1995 and garnered 9 Academy Award nominations. A documentary *Mission Control: The Unsung Heroes of Apollo* is currently available on Netflix and the drama surrounding Apollo 13 receives the most attention. You might want to check it out. Click [here](#) for further details on the cause of the Apollo 13 accident.



So during your next visit to the Centre of the Universe be sure to go to the *middle dome*. As you peer through the Boller and Chivens 16 Inch, pause and reflect on the role it played during one of the most dramatic moments of space travel.



A portion of the glass negative which captures the cloud of gas from the Apollo 13 explosion. Taken on April 13th 1970 by Frank Younger and Ernie Pfannenschmidt using the 16 Inch Cassegrain telescope on Mount Kobau.

# RASC Victoria Centre Council 2017 / 2018

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Nat RASC Anniversary Wrkg Group	Dr. James Hesser	<a href="mailto:james.Hesser@nrc-cnrc.gc.ca">james.Hesser@nrc-cnrc.gc.ca</a>
FDAO Liaison	Laurie Roche	
UVic Liaison	Alex Schmid	
Observing	David Lee	
	Li-Anne Skibo	
	Dan Posey	

## Online Resources

### Magazines

[SkyNews](#) Our National RASC Newsletter  
[Sky & Telescope](#) Magazine  
[Astronomy](#) Magazine  
[Astronomy Now](#) Astronomy in the UK  
[Amateur Astronomy](#) Magazine  
[Astrophotography](#) Magazine



### Borrowing Telescopes

The centre has telescopes for new and seasoned observers that members can use. Contact Sid Sidhu from the email list above.