

# SKYNEWS



RASC Victoria Star Party in Metchosin, August 31<sup>st</sup>, 2013; by Chris Gainor

## A RASC Retrospective

Given what the last few years have been like, you could be excused for feeling that 2013 might as well be 1913, with regards to the year being part of a different era. That year, while the RASC Victoria Centre continued its energetic schedule of public outreach, the background activity to prepare to host the RASC General Assembly in 2014 was ramping up. There was a lot of talk about updating the light pollution map of Greater Victoria, something that was only recently put into action under the leadership of David Lee.





In March of 2013, RASC Victoria held our annual Messier Marathon up at Observatory Hill, with observers trying to locate and identify as many deep space objects as possible from the *Messier List* in one evening. Micah recorded 102 of them that night! This was an accomplishment that required relocating to several locations on *the Hill* to see them all. RASC Victoria had Astronomy Day at the University of Victoria, with numerous other astronomy organizations also there taking part. August was bookended by the Island Star Party in Cowichan at the beginning of the month and the 13<sup>th</sup> annual RASCals Star Party in Metchosin at the end of the month. RASC Victoria had telescopes, as well as almost always a tent and information tables set up, as a part of larger events like the Westshore Hobby Show, Scouts Canada Beaversee, Saanich

Strawberry Festival, Buccaneer Days, Symphony Splash, Saanich Fair, and the Fall Fairfield. Our RASC Victoria Centre's annual general meeting and dinner was held in November at the Moon Under Water Pub.

The Centre of the Universe and Plaskett Telescope started up their annual Saturday public outreach evenings for the year on May 7<sup>th</sup>, run by the National Research Council and RASC Victoria, only for the government to shut the program down in August that same year. For the last Saturday night, a petition to parliament was made available to visitors, asking to reverse the decision to close down the public outreach program. For obvious reasons, the table (*seen top left*) with the petition was set up outside the gates of NRC property.

While one government was turning its back on the scientific community, another stepped up to make some positive change for amateur astronomers. RASC Victoria started working with the Municipal Council of Oak Bay to have Cattle Point designated as an urban star park; to make it one of only two in Canada. Cattle Point had long been the stomping ground for local observers and astrophotographers, but had seen much less use since the establishment of the Victoria Centre Observatory up on Little Saanich Mountain. Wanting to get more focus on the soon to be designated urban star park, Bruce Lane created the RASCals of Cattle Point monthly public outreach event, near the quarter moon, starting in October. Unfortunately, due to the less than accommodating weather in Greater Victoria during the non-summer months, it wasn't until February 2014 when we had our first clear skies for this scheduled event. With the return of *Summer Saturdays* at the Centre of the Universe in 2015 and increasing expansion of their schedule in the years that followed, the RASCals of Cattle Point scheduled their last evening in March of 2017, when the only remaining weekends not overlapping FDAO events on *the Hill* were the less-than-optimal nights of late autumn and winter.







Sid Sidhu, seated behind the RASC Victoria information table for Astronomy Day at UVic, April 27, 2013; by Jim Cliffe

That year, Nelson Walker was the Centre's President and Laurie Roche our Past President, with Charles Banville and Sherry Buttnor (also the Membership Coordinator) serving as vice presidents. Deborah Crawford was the Secretary, Diane Bell was the SkyNews Editor, Michel Michaud our Centre Librarian, and Bill Weir the Observing Chair. Sid Sidhu was in charge of telescopes and the school program, Joe Carr was managing our website, and Matt Watson the system's administrator; three constants today from that time. Our organization's preparations for hosting the 2014 RASC GA were headed up by Paul Schumacher and Mark Bohlman (who also served as the light pollution abatement officer and as our representative to RASC National). This organizational feat also included arranging for an astronomy exhibit at the Royal British Columbian Museum, to coincide with the 100<sup>th</sup> anniversary of the RASC Victoria Centre in 2014.

I was in my first full year as the Treasurer, having been appointed/elected/ambushed (*all three are applicable*) near the end of 2012. After finding myself in the role of *chief cheque dispenser*, I quickly discovered that there was a lot more to the role and found my way thanks to some supportive veterans on the RASC Victoria Council. The treasurer position is a great way to learn more about the *nuts-and-bolts* aspects of our organization and with Deborah Crawford stepping down, after four years on the job, it's just one of many essential roles on council that need to be filled. Just remember that numbers are fun! (*Ed. during the editing process of this issue I learned that someone has stepped forward to be the next treasurer*).

Bruce Lane

## Editorial Remarks



For those of us not working behind the scenes, winters in Victoria tend to be a quiet time in the amateur astronomy community. We've certainly changed that narrative a bit with the addition of the *Special Interest Groups* to the already existing *Astro Café* (which for the time being has absorbed our monthly meetings). Things tend to be slower up at the Victoria Centre Observatory this time of year, but the current state of road construction on Observatory Hill has slowed things even more. After a lot of discussion and grappling with the minutiae of the latest version of our bylaws, your RASC Victoria Centre Council will be presenting these bylaws for the approval of the membership at a special meeting on Monday, February 13th (7pm).

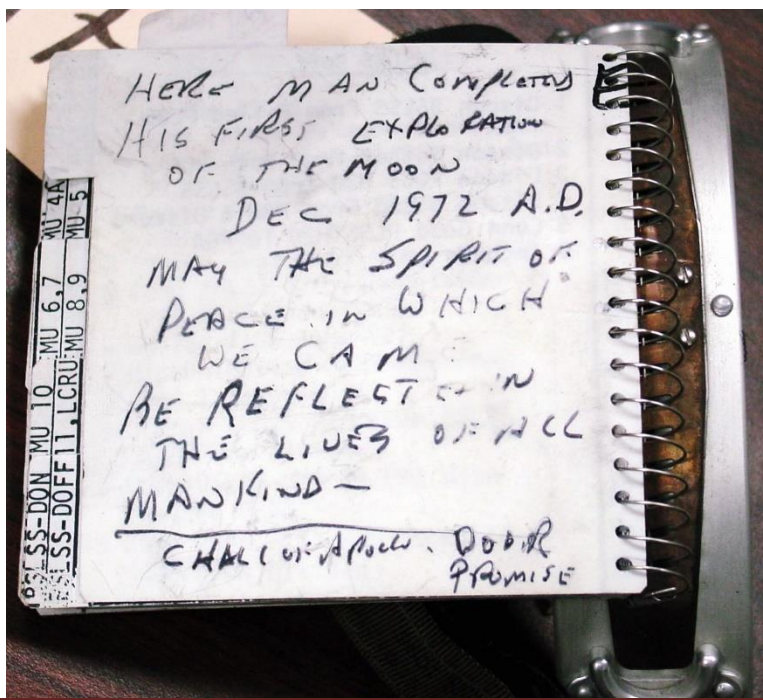
Our Past President, Reg Dunkley, has been working behind the scenes to find candidates to fill out the RASC Victoria Council before the annual general meeting in March. If you've been thinking about

serving on our council and he hasn't been in contact with you yet, take the initiative and contact him at [pastpres@victoria.rasc.ca](mailto:pastpres@victoria.rasc.ca) to see where you can help. Astronomy Day is right around the corner and it feels like the incoming council will be taking their seats just before the tables are being set up for the big annual public outreach event. Fortunately for the new council members, Jeff Pivnick has already taken point in organizing Astronomy Day, so a lot of the planning and preparations will be taken care of by the time the new council is elected in March. It will certainly give them a bit more breathing space when the public outreach season is just around the corner.

There's more to the opening article in this issue than simply being a look back down memory lane and it wasn't even because it was that or an extensive report on the massive snowfall we endured in December. Especially now, as we're starting to poke our heads up to find our way (hopefully wearing a mask in public), despite the fact that the Pandemic is anything but over, it's sometimes useful to use the past as a map to regain our bearings. This look back in time is a reminder of what things were like in the *Before Times*. RASC Victoria has already returned to doing school programs, volunteering for FDAO evenings, and doing some of the larger annual events; like the Saanich Fair, Astronomy Day, and Fall Fairfield. Others are starting to think about renewing our participation to other yearly events, like the one we had at Fort Rodd Hill. As we continue to witness a shift in activity, organizers of these events will be looking for volunteers. RASC Victoria's online engagement throughout this pandemic has surpassed anything we've ever done before, but at some point, we'll need more volunteer *boots on the ground*, or in our case Dobs on the ground. We just have to be mindful about the fact that we are still in the middle of a pandemic and balance that against our enthusiasm to go back to the way things used to be.

In this issue of *SkyNews*, we'll have more recaps from our Centre's activities, a few more stray pictures from the 50<sup>th</sup> Anniversary of the Apollo 17 Mission, as well as all the astrophotography and articles you've come to expect from the *Victoria Centre SkyNews*.

Bruce Lane: *SkyNews* Editor





## President's Message for January



The play *"Silent Sky"* is about to be performed this month at the Langham Court Theatre. The play is about Henrietta Leavitt, the early 20th century astronomer from Harvard. *"Henrietta Leavitt was a woman ahead of her time – an amateur astronomer who transcended her post as a Harvard clerk to make significant observations on the universe and change astronomy forever."* I've heard about this play and I'm really looking forward to seeing it! One can also find out much about her in Dava Sobel's wonderful book: *"Glass Universe"*.

Henrietta Leavitt was charged with the job of cataloguing thousands of stars in photographs of the Magellanic Clouds - two local dwarf galaxies which are visible in the southern hemisphere. These galaxies are close enough that individual stars are discernible in photographs, but far enough away that the stars can all be considered to be the same distance away from the earth. Many, many photographs were taken over time, and Miss Leavitt recognized that there are stars there that are variable in brightness with periods ranging from a day to half a

year. She used a tool they affectionately called a *"fly spanker"*, which was actually a wire frame holding a small photographic plate with stars of known magnitude. With this tool, she tracked the brightness of these variable stars and discovered that the longer the period, the brighter the star.

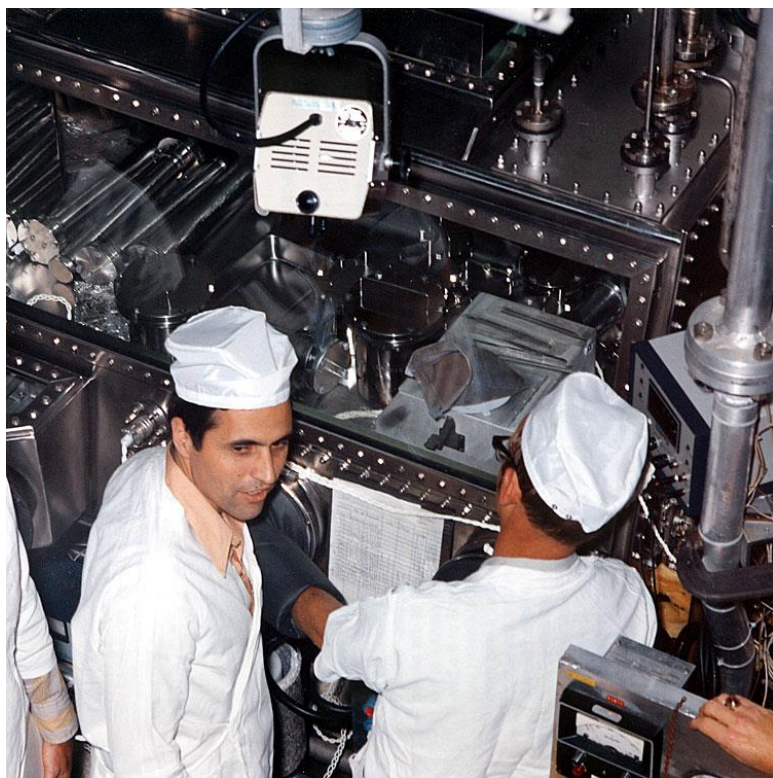
Better still, when she plotted the logarithm of the variability period against the brightness magnitudes of these stars, she saw a straight line. Aha!!! The straight line means there is a mathematical equation, which links the variable in the graph and can be applied to other similar objects – such as variable stars in other galaxies. Henrietta Leavitt's law continues to be fundamental to understanding the nature of the Universe.

As a professional scientist, I live for these *Aha* moments. There are days, weeks, or sometimes years of turning the crank with boring measurements and compilations of data. And then, every once in a while, I get an idea, plot the data in a new way, discover a straight line, and the Universe opens up! Aha!!

I also get this feeling with my amateur astronomy hobby. Last weekend, I finally understood how the length of day varies with the obliquity of the Earth's orbit – something which is fundamental to how a sun compass (which I use for my fieldwork) works. I hope you can experience an *Aha* as well – whether it is finding some white fuzzy in the eyepiece, photographing a hydrogen cloud a better way, or understanding some astronomical concept for the first time. Go and discover!

*Look Up,*

*Randy Enkin, President@Victoria.RASC.ca*



## Astro Café: Hybrid Meetings



The weekly social gathering of amateur astronomers on Monday nights, known as *Astro Café*, was reduced to being an online gathering via Zoom for the beginning of the Pandemic. As with many groups, we were trying to find ways to still function as an astronomical society, without being able to meet in person. While the Pandemic isn't ending anytime soon, RASC Victoria has shifted from *Astro Café* being online only, to being a hybrid event. It's still accessible online, but RASC Victoria members can also attend this event live at the Fairfield & Gonzales Community Association centre. Of course, this dual format means double the hosting requirements, so RASC Victoria will need more of a volunteer commitment, both online and onsite. You can access updates about *Astro Café* at the Virtual *Astro Café* at: <https://www.victoria.rasc.ca/astronomy-cafe/>

The first *Astro Café* of December was hosted by Randy Enkin and he talked about the bad weather forecast for the upcoming occultation of Mars, changing the starting-ending time for *Astro Café*, and led a discussion about what astronomical gifts that people are giving or hoping to receive, only for it to become a series of book recommendations. Ron Fisher gave a presentation on *Beginning in Astrophotography*; Alistair Ling dropped in from RASC Edmonton Centre (in-person at the Fairfield-Gonzales Community Centre) to talk about the goings on from the other side of the Rockies; and Brock Johnston showed his Mars image, resulting in a discussion of observing techniques. David Lee gave an update on the *Special Interest Groups* (with the Electronically Assisted Astronomy group's activities being folded into the Beginner's group and Citizen Science becoming a new group to take its slot) and talked about helping out a local school looking to do some astronomy; Lauri Roche discussed the FDAO Star Parties and other upcoming events; and Chris Gainor gave an update on the Artemis I mission.

The next *Astro Café* was hosted by Brock Johnston, with David Lee starting things off talking about the Astronomical Society of the Pacific and their focus on public outreach. Jeff Pivnick announced an upcoming play about Henrietta Leavitt, *Silent Sky*, at the Langham Court Theatre; Joe Carr gave a presentation on *Astronomical Images - Real or Fiction?*, inspired by a recent Saturn image, leading to a lengthy discussion. Randy talked about the upcoming changes to the Victoria Centre's Constitution and Bylaws; there was some discussion about the lunar occultation of Mars; Chris Gainor gave an Artemis post mission update; and there were numerous tributes given to Dave Bennett, a long-time member who recently passed away.

With the encroaching holiday season, the last *Astro Café* of the month was on December 19<sup>th</sup>, again hosted by Brock. Nathan Hellner-Mestelman mentioned his tribute video to the Artemis I mission and the next stage of space exploration; David Lee gave a quick update on the RASC Robotic Telescope; and Brock Johnston, Bill Weir, and David Lee showed their results sketching and imaging Mars during the occultation. Michel Michaud joined online from Quebec, to talk about the observing conditions in Rimouski, leading to further discussion. Joe Carr reviewed the RASC Victoria buy and sell portion of the website; a first-time visitor to *Astro Café* talked about *The Human Cosmos, Civilization and the Stars* book by Jo Marchant; and Bill Weir discussed using an apodizing mask for reducing the glare of planets.

Bruce Lane







Snow Trail in Metchosin, December 21<sup>st</sup>, 2022; by Sherry Buttner

## Special Interest Groups

### Getting Started in Astronomy

The Beginners Group's meeting in January came quickly, after the holidays, so we spent most of our time talking about whatever clear skies we had experienced during the break. We will continue next month with catalog systems and naming conventions. In the coming months, we will kickstart a discussion on how to get started in both double star and variable star observing. For more information on this group, please contact David Lee at [david@victoria.rasc.ca](mailto:david@victoria.rasc.ca)

### Astrophotography

The astrophotography SIG continues with the occasional image in spite of the poor weather. David Payne made a presentation to an astrophotography group in San Jose about GHS (Generalised Hyperbolic Stretch). For more information about this group, please contact David Payne at [vp@victoria.rasc.ca](mailto:vp@victoria.rasc.ca).



### Electronically Assisted Astronomy

The EAA SIG has been temporarily shelved due to low levels of activity. In its place, we will be starting up a new citizen science focused SIG. More information please contact David Lee at [david@victoria.rasc.ca](mailto:david@victoria.rasc.ca)

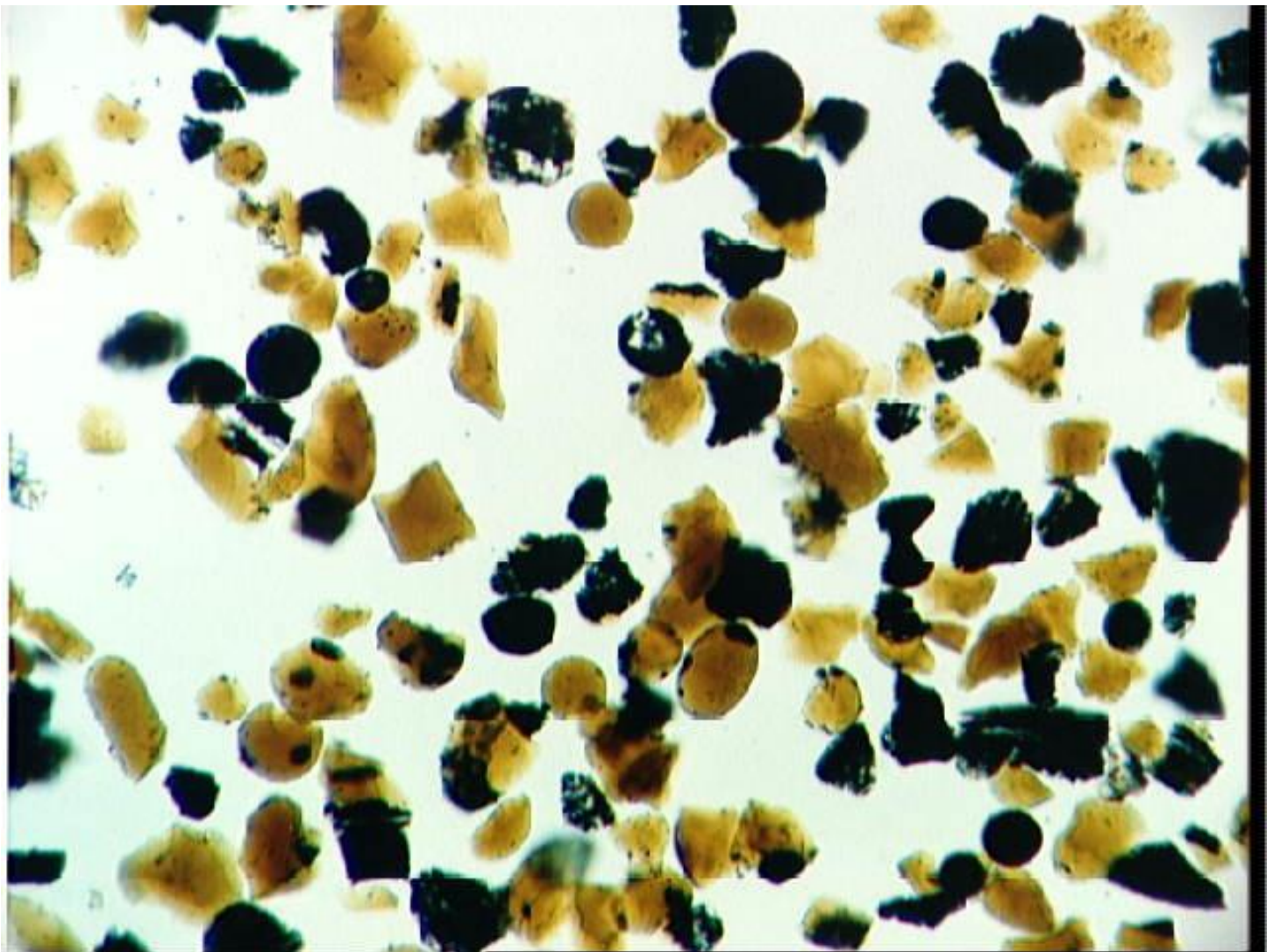
### Makers

The Makers SIG is open for business to discuss member projects, and to answer questions associated with repair and development. For more information about this group, please contact Jim Cliffe at [jim@victoria.rasc.ca](mailto:jim@victoria.rasc.ca).

### Citizen Science SIG

The Citizen Science SIG will be discussed at an *Astro Cafe* evening in more depth, in either January or February. David Lee will present a survey of historical and present-day initiatives. The establishment of a SIG will follow. For more information on this group, please contact David Lee at [david@victoria.rasc.ca](mailto:david@victoria.rasc.ca)

*David Lee*



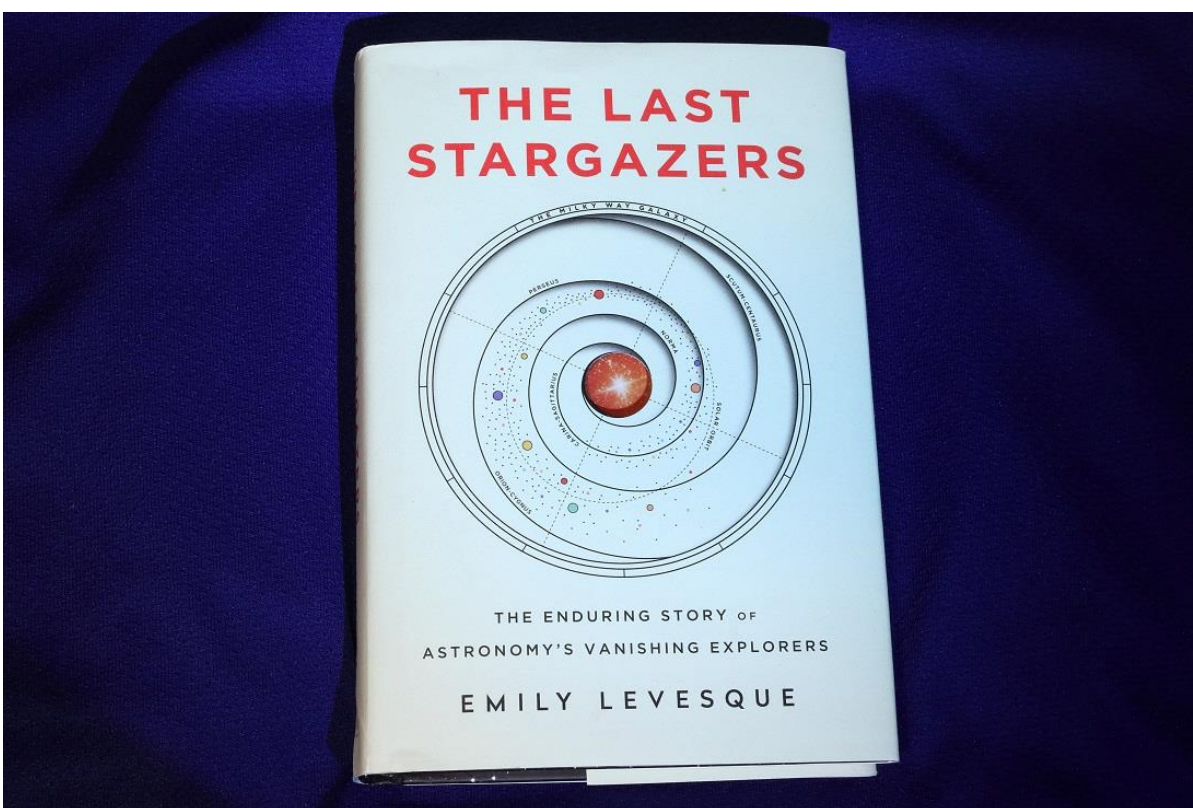
Glass and Particle samples collected during the Apollo 17 mission, Courtesy of NASA.



## From the Library

The RASC Victoria Centre Library is housed in the Astronomy Department's faculty lounge, located on the 4th floor of the Elliott Building, at the University of Victoria. It contains over 500 titles, curated by Alex Schmid, our RASC Victoria Centre Librarian. Alex is currently running our library in the same way the Greater Victoria Public Library runs its shut-in branch, driving around to do deliveries and pickups for our membership to provide access to books from the collection. For more information or to make a book delivery request, please contact Alex Schmidt at: [librarian@victoria.rasc.ca](mailto:librarian@victoria.rasc.ca)

Our library covers many aspects of astronomy: observing, astrophotography, telescope construction, space exploration, astrophysics, and much more. Normally, the library is opened up during the social gatherings in the faculty lounge, after our monthly meetings, with coffee, juice, and cookies provided by our Centre. In the past I've been doing book reviews of the contents of our Centre's library, but until the resumption of our monthly meetings at the University of Victoria, I'll mostly be doing reviews of the astronomy books from my personal library, ones that can be purchased online or better yet from your local bookstore.



This month we're taking a closer look at *The Last Stargazers*, by Emily Levesque. Currently an associate professor of astronomy at the University of Washington State since 2015, Levesque got a taste for observing the night sky early in life. She was looking through her father's orange 203mm (8") aperture Schmidt-Cassegrain telescope (a design familiar to many amateur astronomers), before the age of two and enthralled by the scientific interests of her older brother. Her parents took her to astronomy public outreach events at the local college observatory and sent her to science camps in the summer. Unlike a lot of people going to university, she had a laser focus of what she wanted to do long before completing high school. In addition to teaching and putting in time on many of the largest observatory telescopes available, Emily Levesque is an excellent public speaker and passionate science advocate. When RASC Victoria returns to holding monthly meetings at the University of Victoria, given that she's based out of the University of Washington, Emily Levesque is someone we might want to dip into the RASC National's speaker fund to bring up across the border for a lecture.

*The Last Stargazers* is a love letter to astronomy, by someone who *walked the walk* as a professional astronomer. While there's a danger of a story like this being a bit on the dry side, Emily Levesque writes in a personable style that engages the reader. The book is also chocked full of astronomer work anecdotes, both her own and those of fellow astronomers. It's an interesting view into the life of a professional astronomer and something that can be genuinely be appreciated by those with an amateur standing in this hobby. While the stakes are higher for astronomers, with limited time on the largest observatory telescopes, we can all appreciate the challenges posed by the weather. Levesque does a good job explaining the process of data harvesting and many other facets of her field, without drowning the reader in math or requiring that they constantly look up words in a scientific dictionary. As such, it's a bit of a *page turner* compared to many books on the subject. In amongst the personal experiences and anecdotes, I learned a lot of details about how astronomers go about their business, both today and in the last century.

I liked that Levesque pays proper respect to the telescope operators that astronomers rely on, something I'd honestly like to see more of in other books about astronomy. You really get the feel of the transient career of an astronomer moving from observatory to observatory, like a naval officer constantly changing ships. *The Last Stargazers* is both an enjoyable and informative read, and it's available by order from your local bookstore.

Bruce Lane



Mars, Dec 1, 2022; by Lucky Budd



## Hill and Dale (Observing on the Island)



December skies were as cloudy and even colder than usual, but there were a few breaks in the clouds and the odd clear night. The opposition of Mars to Earth got some telescopes pointed towards the red planet, with mixed results due to the weather. This included a lunar occultation with Mars (*seen left*), imaged by Nathan Hellner-Mestelman under challenging weather conditions. With the weather being colder than what the local denizens are used to enduring in the Garden City, it made it a bit harder than usual for a lot of amateur astronomers to convince themselves to leave the warmth of the hearth. Greater Victoria endured our fifth largest snowfall on record just five days before Christmas, which feels about right considering the amount of quality time I spent with my snow shovel.

Access to the Victoria Centre Observatory is currently restricted due to road construction on Observatory Hill. A reminder that although the VCO belongs to and is for the use of the members of the RASC Victoria Centre. In the *Before Times*, MiCs (Members in Charge) ran both weekly scheduled and unscheduled sessions to take advantage of the weather, but for the foreseeable future observing sessions will be a lot less scheduled and less frequent. The VCO is located on National Research Council property. This means that all visitors to our observatory must be on our observer list and registered with the NRC. To get on the list, just contact Chris Purse (Membership Coordinator) at [membership@rasc.victoria.ca](mailto:membership@rasc.victoria.ca) and we'll see you up there on the Hill one of these nights in the not excessively distant future.

*Bruce Lane*



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## In Closing



Like many *warmlanders* living on Vancouver Island, my chickens have completely forgotten the recent unseasonable cold and heavy snowfall, and have moved on to complaining about all the rain we've been having. While we were spared this time around from the devastation that can be caused by a *conga line* of atmospheric rivers, it's only because they went south for the winter and are making a mess of California instead. Last year was the 5<sup>th</sup> warmest year on record for this little planet of ours, where British Columbia witnessed a lot of record temperatures on both ends of the spectrum. It's difficult to say what manner of madness the weather will

treat us to in 2023, but if the last few years are any indication, you'd do well to prepare for the worst and hope for the best.

A global pandemic that we should probably be on the other side of by now has apparently been declared the winner over humanity, due to the ineffectiveness of the *Choose Your Own Adventure* policy to a global public healthcare crisis. 2022 was the deadliest year of the Pandemic and there are no indications that 2023 will be any better. China has gone from a *Covid Zero* policy, which might have been more successful with a lot more vaccination, to just throwing up their hands and letting things go completely off the rails. It doesn't help that the Chinese government has not only stopped putting in any serious effort to tracking covid-19 deaths but are also denying how widespread the outbreaks are, which is exactly how this epidemic became a pandemic in the first place. The timing for this is made much worse by the Lunar New Year's celebration, which before the lockdowns was the largest annual human migration on the planet. Many people getting off planes from China are now testing positive for covid-19 and after sharing the cabin air with their fellow passengers, many more are likely to test positive in the days that follow. It's probably not the best time to choose to take advantage of lax public health mandates to do a lot of traveling. The Kraken sub-variant is now running amok, with epidemiologists reporting that it's even more transmissible than your *garden variety* Omicron variant and people contracting it are more likely to suffer long-covid.

There's a comet in the sky! That's right, an actual astronomical event for you to image or observe in the night sky. This comet is at the point now (magnitude 5.1) where it can be observed through a pair of regular binoculars and will pass closest to the Earth on February 1<sup>st</sup>. It's currently (*January 23rd*) located in the night sky, left of the Big Dipper and below the Little Dipper, next to Theta Draconis (SAO 29765) in the constellation of Dracos. There have been some clear skies, which in and of itself can be in scarcity this time of year, so we'll be seeing some images in next month's issue of *SkyNews*. The comet, designated C/2022 E3 (ZTF), is on a bit of a long period orbit arriving only every 50 000 years. The last time it was in the neighbourhood, humans were in the process of Upper Paleolithic mass migrations out of Africa, one that humans today are primarily descended from. This migration coincided with more specialized tool making and later the extinction of the Neanderthals. It was probably cloudy a lot then too. Barring some incredible advancements in the downloading of the human consciousness into computer hardware, so you can play Wordle forever, chances are quite good that this is the last chance anyone currently alive on this planet will ever have to see this comet.



The regular meetings and events hosted by other astronomical societies on Vancouver Island continue, regardless of the winter weather. The Centre of the Universe and Plaskett Telescope on Observatory Hill are still hosting monthly events, with the next one on January 28<sup>th</sup>, but due to the physical site being closed for road construction these are online only events. These public outreach events on Observatory Hill are hosted by the National Research Council and Friends of the Dominion Astrophysical Telescope, with volunteers from the RASC Victoria Centre also taking part. After taking a break for the holidays, the University of Victoria returned on January 18<sup>th</sup> to hosting weekly Wednesday open house events at the Bob Wright Centre Observatory, from 7:30-9:30pm. The Nanaimo Astronomy Society have their next monthly meeting for members scheduled for January 26<sup>th</sup>. The Nanaimo group's meetings are hybrid events, with both in person and online attendance via ZOOM. The Comox Valley Astronomy Club's next monthly meeting is at the Courtney Public Library on February 6<sup>th</sup>.

*Bruce Lane: SkyNews Editor*



Snow in Metchosin, December 20<sup>th</sup>, 2022; by Sherry Buttnor

## Photography Credits

Cover: RASC Victoria Star Party in Metchosin, Aug 31, 2013; by Chris Gainor

Page 2: Signing a Petition to Parliament, Aug 24, 2013; by Chris Gainor

Page 2: RASC Regulars volunteering on the last night at the Centre of the Universe before it closed (Bruno Quenneville, Roy Watson, Jennifer Bigelow, and Dave Bennett), Aug 24, 2013; by Chris Gainor.

Page 3: Sid Sidhu, seated behind the RASC Victoria information table for Astronomy Day at UVic, Apr 27, 2013; by Jim Cliffe

Page 4: Crop of Bruce Lane (SkyNews Editor) at 2013 RASCal Star Party in Metchosin, by Chris Gainor

Page 4: Apollo 17 Mission, *Gene wrote this note on the back of his EVA-3 cuff checklist before the prior rest period. It is a 'tickler' to remind him of what he wanted to say prior to climbing the ladder for the last time. Above the line is the text of the plaque affixed to the ladder and, below the line, the words "Chall(enge) of Apollo. Door Promise."* Photograph of the flown checklist page taken by Larry McGlynn at the Kansas Cosmosphere in 2000. Courtesy of NASA.

Page 5: Randy Enkin (RASC Victoria President) with Sextant, Feb 20, 2021, by Eva Bild.

Page 5: Apollo 17 Post Mission, *Jack Schmitt participates in an initial examination of the Apollo 17 samples, in this case a bag of soil probably collected as part of a rake sample.* Dec 27, 1972. Scan by Ed Hengeveld. Courtesy of NASA.

Page 6: Photograph and Design of Astro Cafe Mug, by Joe Carr

Page 6: Apollo 17 Post Mission, *the Apollo 17 astronauts confront the Recovery cake. Note the blood under the nail of Jack's middle finger.* Dec 19, 1972. Scan by J.L. Pickering. Courtesy of NASA.

Page 7: Snow Trail in Metchosin, Dec 21, 2022; by Sherry Buttnor

Page 8: Apollo 17 Post Mission, *"These orange glass spheres and fragments are the finest particles ever brought back from the Moon. Ranging in size from 20 to 45 microns (about 1/1000 of an inch) the particles are magnified 160 times in this photomicrograph made in the Lunar Receiving Laboratory at the Manned Spacecraft Center."* Scan courtesy NASA Johnson. Courtesy of NASA.

Page 9: Posed Book, "*The Last Stargazers*", taken in Editor's home on Jan 25, 2023, by Bruce Lane

Page 10: Mars, Dec 1, 2022; by Lucky Budd

Page 11: Lunar Occultation by Mars, Dec 7, 2022; by Nathan Hellner-Mestelman

Page 11: RASC Victoria Metchosin Star Party, Aug 31, 2013, by Joe Carr

Page 12: "Princess", Buff Orpington chicken, Jan 25, 2023; by Bruce Lane.

Page 13: Snow in Metchosin, Dec 20, 2022; by Sherry Buttnor

Page 15: Apollo 17 Mission, Gene Cernan's EVA-1 Heart Rate. Courtesy of NASA.



## Call for Article and Photo Submissions for the February Issue

SkyNews is looking for submissions of astronomy photos and articles for the February issue of our Victoria Centre's magazine. Send your submissions to [editor@victoria.rasc.ca](mailto:editor@victoria.rasc.ca)

## RASC Victoria Centre Council 2023

Director Positions	Name	Email
Past President	Reg Dunkley	<a href="mailto:pastpres@victoria.rasc.ca">pastpres@victoria.rasc.ca</a>
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1 <sup>st</sup> Vice President	David Payne	<a href="mailto:vp@victoria.rasc.ca">vp@victoria.rasc.ca</a>
2 <sup>nd</sup> Vice President	Garry Sedun	<a href="mailto:vp2@victoria.rasc.ca">vp2@victoria.rasc.ca</a>
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Secretary	Jill Sinkwich	<a href="mailto:secretary@victoria.rasc.ca">secretary@victoria.rasc.ca</a>
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Schools Program/Telescopes	Sid Sidhu	<a href="mailto:telescopes@victoria.rasc.ca">telescopes@victoria.rasc.ca</a>
Schools Program/FDAO Liaison	Laurie Roche	<a href="mailto:schools@victoria.rasc.ca">schools@victoria.rasc.ca</a>
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Technical Committee Chair/Sys Admin	Matt Watson	<a href="mailto:admin@victoria.rasc.ca">admin@victoria.rasc.ca</a>
Website Content	Joe Carr	<a href="mailto:web@victoria.rasc.ca">web@victoria.rasc.ca</a>
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NRC Liaison	James di Francesco	
<b>Members at Large</b>	Jim Hesser	David Lee
	John McDonald	Jeff Pivnick
	Chris Gainor	Dan Posey
	Marjie Welchframe	

