

SKYNEWS



Full Moon Setting over Victoria, Feb 27, 2021, by John McDonald

Zooming Through Another Meeting

It's been a year of having one in-person experience after another removed by the Pandemic, the latest being our RASC Victoria Centre Annual General Meeting. Last year, as is the custom, we held our annual general meeting at a rented hall, with a dinner and guest speaker. This year, given that our AGM would be an online business session, it was decided to spare any guest speaker the experience of sitting through what was now a purely administrative meeting.

The primary reason for the annual general meeting, the budget, was presented by Deborah Crawford, who has agreed to continue on as Treasurer. Barbara Lane, as Secretary of RASC Victoria, gave the annual report to summarize our activities over the last year. We had to lean on our online resources and are fortunate to have a number of very technologically abled members, like Joe Carr, who manages our website. In an attempt to keep our members engaged, both Astro Café (now via Zoom) and *SkyNews* went without their usual summer holidays to provide additional online content for the membership. The school program, run by Laurie Roche and Sid Sidhu, also shifted to online presentations, allowing them to increase the scope of their engagement, from Greater Victoria to now include schools in the BC Lower Mainland.

One of the other bits of important business conducted at the Annual General Meeting is the election of the RASC Victoria Council. After completing his two year term, during these troubled times, Reg Dunkley stepped down as president. Our new president, Randy Enkin has already experienced his first Council meeting (*Ed. Don't worry, Randy. They get a lot easier after the first one*). Sherry Buttnor has returned to Council as the acting vice president, so the new president gets some help. Sherry is also joining Bill Weir to be our representatives to RASC National. Malcolm Scrimger has become our new public outreach coordinator. Hopefully, we'll have some return to normalcy before too long to have some in-person public outreach. Otherwise, it's the same people in the same roles (*as seen on the Council list on page 12*).

Awards were announced at the meeting and dropped off at the homes of recipients who were home, by the outgoing President Reg Dunkley. Alec Lee received the Award of Excellence in Astrophotography for his image of the Comet Neowise; Dan Posey received an Award for Excellence in Astrophotography for his image of the Rho Ophiuchi Complex; and Chris Purse received the Newton Ball Service Award. Chris Gainor received a certificate of appreciation for his contributions to the history of astronomy, for the publishing of his book for NASA on the history of the Hubble Space Telescope, while Reg Dunkley, Joe Carr, and Dave Robinson also received certificates of appreciation for their service to the Centre over the last year. RASC National observing certificates were presented to Jill Sinkwhich, in absentia, for her Explore the Universe and to Randy Enkin for Isabel Williamson Lunar Observing Program (just the 2nd person from the Victoria Centre to complete it). It was also announced that Diane Bell will posthumously receive the 2021 RASC National Service Award. With the RASC Victoria Council in place for 2021 and their first meeting already behind them, for the time being it's online and social distancing business as usual.

Bruce Lane



Editorial Remarks



We have a new president for our RASC Victoria Centre, but unfortunately we're dealing with the same old Pandemic as before. Canada continues to suffer from vaccine nationalism, by which those nations who manufacture the vaccine are well ahead of those that do not. We're in the same boat as countries like Australia, who had a quarter of a million vaccine doses recently blocked from being exported from Italy. While the EU is being slammed for this act of vaccine nationalism, the UK and US have been outright prohibiting exports to get ahead of the rest of the world, although the US has signalled that they may intend to start sending vaccines soon to Canada and Mexico. Russia and China have been exporting vaccines as a form of influence peddling, to the point where they are exporting more than they are using domestically. Here on Vancouver Island, our best defence continues to be geography, despite the actions of selfish travelers who have been taking vacations throughout this Pandemic. As we begin Spring Break in Greater Victoria, along with a relaxing of some health regulations, it remains to be seen what the effects will be over the next couple of weeks.

The weather wasn't great in February, but we recently enjoyed a number of clear nights, around the new moon in March, which I hope my fellow amateur astronomers had a chance to make use of. The weather is getting warmer, so those of us less enamoured by the cold winter nights will start feeling less hesitancy to going outside and it's definitely time to start spending more time outside. In this issue of *SkyNews*, we'll have more recaps from our Centre's activities, as well as all the astrophotography and articles you've come to expect from the *Victoria Centre SkyNews*. You'll also notice a lot of training photos from the Apollo 15 mission, taken in March 1971, as *SkyNews* continues to celebrate the 50th anniversaries of the Apollo program. Details about these images can be found in the Photography Credits section on page 11.

Bruce Lane: SkyNews Editor

President's Message for March

The RASC Victoria Centre welcomed me 3 years ago. I was asked to give a talk about my moon observations at the Astro Cafe, and then I became a regular. Now, you have given me the opportunity and challenge to be this community's president.

Astronomy has been a big part of my life since I was 8 years old, when Apollo 11 landed on the Moon. While my friends wanted to become astronauts, my attention was on the people on the ground, who were so enthusiastic about the science, and I decided I would become an astronomer. The path one walks in life is seldom a straight line, and mine brought me to earth science. I am a research scientist at the Geological Survey of Canada, studying the physical properties of rocks and sediments, but I have always dabbled in astronomy.

I have learned during the last three years that the amateur astronomy community comprises people with a wide range of interests, skills, and levels; but with a common passion to enjoy and share the sky. I have been involved with many volunteer organizations, and my impression is that the RASC Victoria Centre has an extremely high level of volunteerism and mutual support.

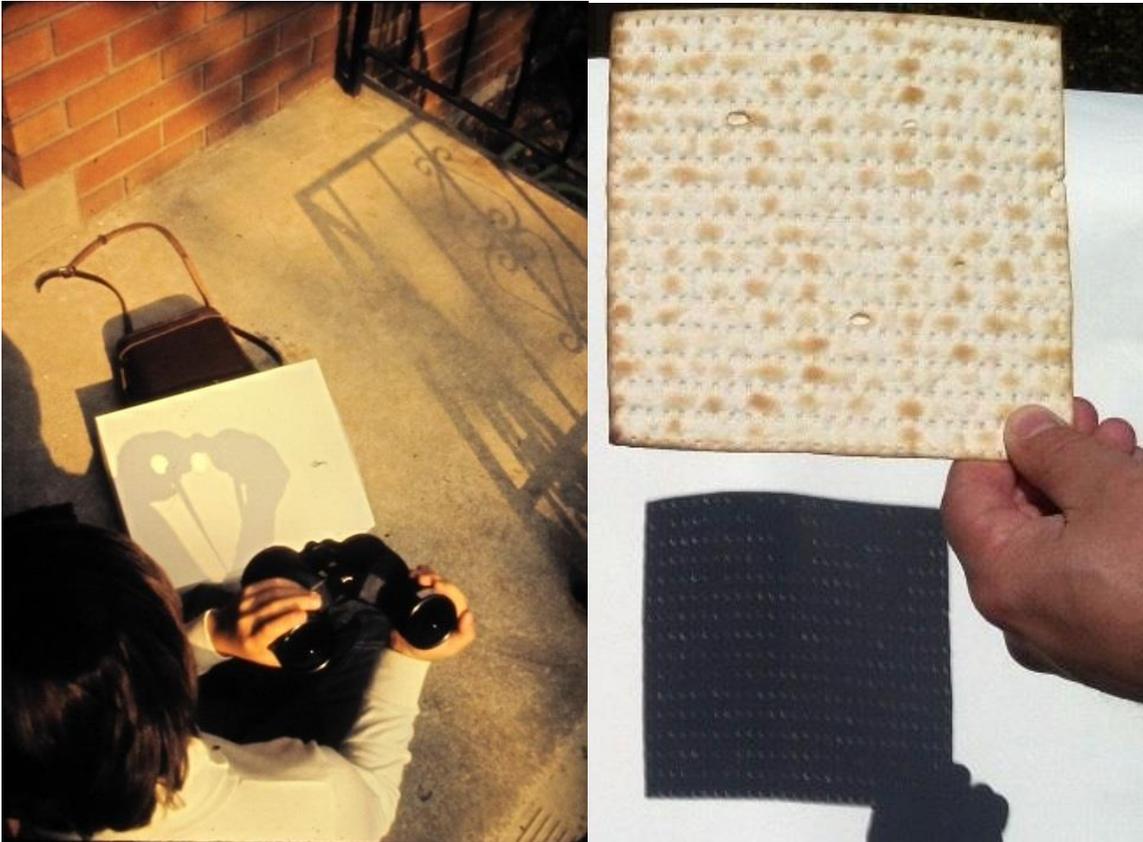


During my tenure as president, I hope to help nurture this spirit, and support our ongoing in-reach and outreach efforts within the broader Victoria astronomy community. I look forward to getting to know more of you, and learn what aspects of astronomy bring you joy and fulfilment.

It is fun to see the various ways astronomy-buffs sign off their letters. "Clear Skies" is wonderful. My predecessor liked "Usable Skies". My sign-off comes from a note my sister has posted over her computer to remind her to get away from it as often as possible. I like the many meanings these two words hold for us:

Look Up,

Randy Enkin, President@Victoria.RASC.ca



10 year old, Randy (left) projecting the solar eclipse and 56 year old, Randy doing the same at a different solar eclipse.

Special Interest Groups

Getting Started in Astronomy

This SIG currently has 17 members (including the lead, David Lee david@victoria.rasc.ca) and meet via Zoom on the 1st Tuesday of each month, at 7:30 PM. This group has already had two meetings and is developing into a very interactive group. Topics are supported by seasoned members and we welcome others in the Centre to help.

Astrophotography

This SIG currently has 14 members (including the lead, John McDonald: john@victoria.rasc.ca) and meet via Zoom on the 4th Wednesday of each month, at 7:30 PM.

Electronically Assisted Astronomy

This SIG currently has 9 members (including the lead, David Lee: david@victoria.rasc.ca) and meet via Zoom on the 1st Thursday of each month, at 7:30 PM. This group has diverse experience and are learning together in developing EAA systems, to further enhance our observing abilities. In addition, it is our goal to investigate how this will aid in public outreach in our socially distanced times.

Astro Makers

This SIG has just started with lead, Jim Cliffe (jim@victoria.rasc.ca) and meet via Zoom on the 3rd Thursday of each month, at 7:30 PM. Initially, this SIG will be working on developing a resource list of maker skills and contacts within Victoria Centre.

David Lee

Astro Café: Continues Online



The weekly social gathering of amateur astronomers on Monday nights, known as Astro Café, is now online. As with many groups, we're trying to find ways to still function as a Centre, without meeting in person. Members are posting their astrophotography, short articles, as well as links to astronomy stories from the Internet. Sadly, you'll have to make your own coffee and the only cookies are those your browser picks up when you visit our website. You can access the *Virtual Astro Café* at: <https://www.victoria.rasc.ca/astrology-cafe/>

The first Astro Café was hosted by Chris Purse, who made announcements about the upcoming annual general meeting. Randy Enkin was virtually given recognition for completing the Isabel Williamson Lunar Observing Program and he presented a lunar sketch he did at the end of January; David Lee and John McDonald discussed the new Special Interest Groups; Joe Carr gave an update on the new Takahashi refractor at the Victoria Centre Observatory;

John showed off a picture of a terrestrial eagle perched on a building downtown; Chris Gainor talked about the Apollo 14 mission anniversary, new missions arriving at Mars, and some articles in the other *SkyNews*; and Reg Dunkley gave a review of the Astro Café page on the RASC Victoria Centre website.

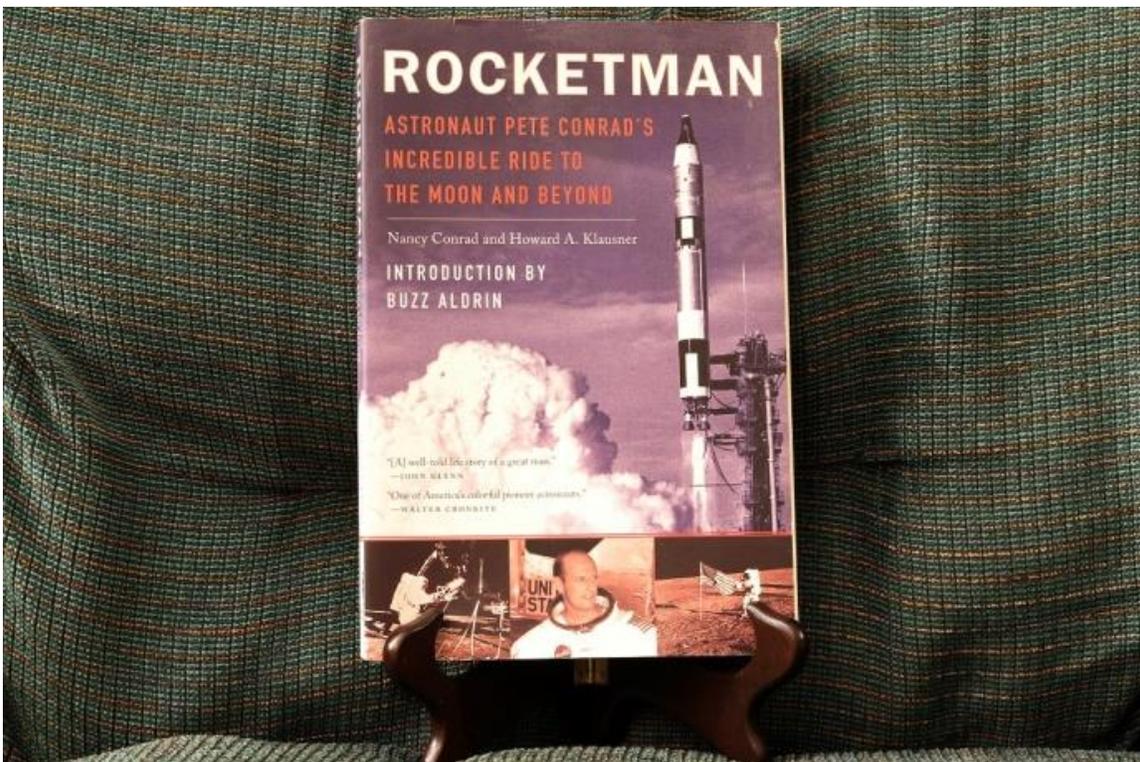
The next Monday's Zoom session was hosted by John McDonald. Chris Purse gave more updates about the upcoming AGM and remaining RASC National calendars for sale; Marjie Welchframe talked about Richard Bell's (Kalamazoo Astronomy) online presentation about beginning astronomy; Reg gave a review of the Astro Café online page; Nick Hammar, an Environmental & Light Pollution Intern at RASC National office paid a visit. There was a lengthy dialogue about the urban star park of Cattle Point discussing in detail *almost* every organized and private outreach effort that has happened there over the last fifteen years. The last Astro Café of February was a composite, with Astro Café doing triple duty as the RASC Victoria monthly meeting and annual general meeting. As discussed in the cover article, new Council members were elected, awards were given, and administrative business was conducted.

Bruce Lane

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 Librarian. 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. 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 be doing reviews of the astronomy books from my personal library, ones that can be purchased online or better yet at your local bookstore.

This month we're taking a closer look at *Rocketman*, by Nancy Conrad and Howard Klausner. This is the biography of Pete Conrad, the 3rd man to walk on the Moon. Howard Klausner is better known as a Hollywood script writer and director, doing both for the well-known movie *Space Cowboys*. In this book, he collaborates with Pete Conrad's wife, Nancy, to tell the story of a real life space cowboy. To be honest, this book is worth reading just for the forward written by his long-time friend, Buzz Aldrin.

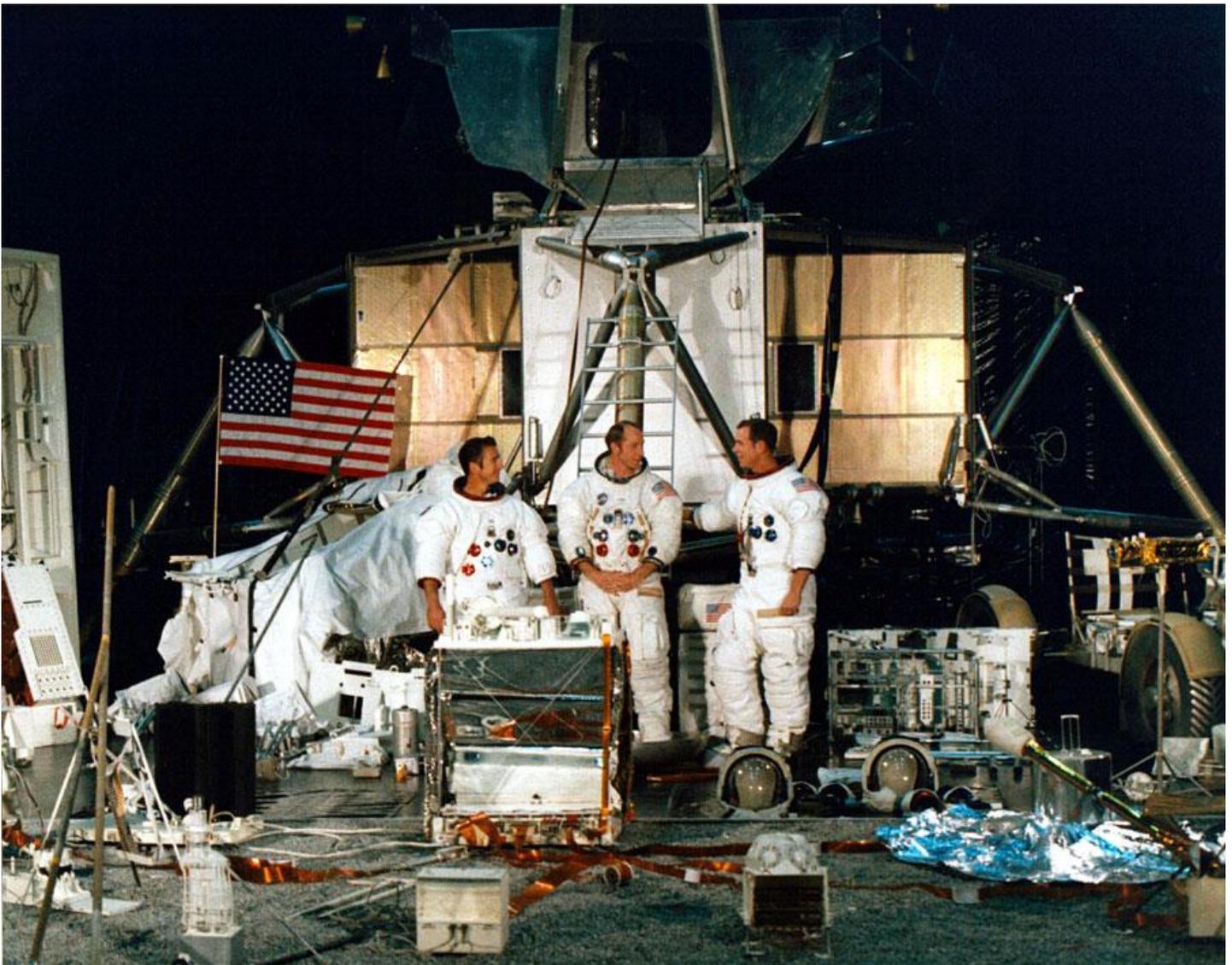


This colourful biography is interwoven with the story of Pete Conrad's 1966 experience of flying around the world in a Learjet 35, with three other experienced pilots, attempting to break the business class jet speed record. You meet Charles "Pete" Conrad Jr. struggling in school with reading and writing, but excelling in math and science. He was also gifted with an amazing mechanical aptitude, raised on reading *Popular Mechanics* and tinkering with the technologies of his time. After working at a local airfield for a few years, but unable to afford the flying lessons he needs to become a pilot, he catches a break by fixing an expert flyer's plane broken down in a remote field, and impressing the former WASP instructor enough with his mechanical ability to give him the flying lessons he desperately craves. Pete Conrad overcame the handicap of dyslexia by sheer determination to get the grades necessary to win a coveted ROTC scholarship to enroll at Princeton, bringing him another step closer to his dream of becoming a jet fighter pilot. He trained as a naval aviator, served on a carrier, and his flying ability soon got him a position at the US Naval Test Pilot School, whose alumni includes more than a few astronauts.

Conrad was invited into the Mercury program, but was put off by the overly intrusive medical testing and the medical staff was a bit put off by his attitude towards them. It got on his nerves to the point where he handed in a stool sample in a gift box, complete with a red ribbon, before taking his leave of the Mercury program. Al Shepherd later convinced Pete Conrad to leave his stint as a test pilot and reapply for the Gemini program, promising much less crazy medical testing by a program that had a better grasp of what it was doing. Conrad had the *right stuff* and became the pilot for Gemini 5 and commander of the Gemini 11 mission. He was the commander of Apollo 12, a much more extroverted leader than the one on the previous mission to the Moon. The often overlooked Apollo 12 mission had a good retelling in the 7th episode of the TV miniseries, *From the Earth to the Moon*, with Canadian, Dave Foley starring as Alan Bean (the point of view character). *That's All There Is*, includes a scene with the three astronauts driving away in their famous matching, gold Corvettes, contrasting their easy friendship with the tensions that existed on Apollo 11. The entire mini-series is a must see viewing experience for fans of space exploration.

Astronaut Pete Conrad would go on to command the first crewed mission aboard Skylab and after retiring from NASA was involved with numerous private space enterprises. *Rocketman* is excellent read about a real space cowboy and his lengthy aerospace career, and it's available by order from your local bookstore.

Bruce Lane



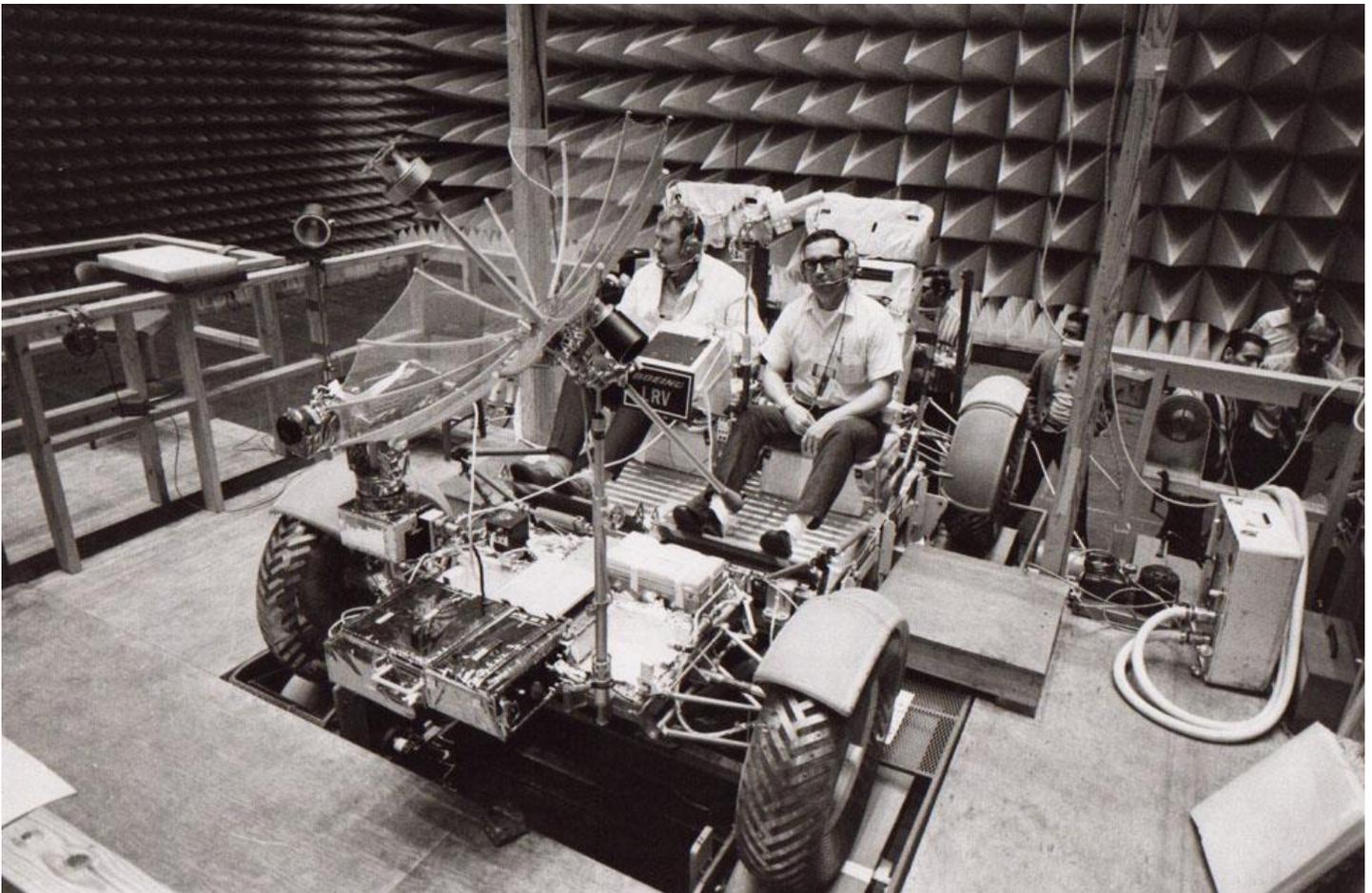
Hill and Dale (Observing on the Island)

Between the cloudy winter weather and the restrictions of the Pandemic, February wasn't a banner month for observers and astrophotographers on Vancouver Island. Matt and Dan, from the Technical Committee, went up to the Victoria Centre Observatory to do some imaging and inventory on February 26th. On the next morning, John spent some time imaging the full moon from home.

The current restrictions up on Observatory Hill, with four observers allowed at the VCO and another two set up at the Plaskett telescope parking lot, are the norm for the foreseeable future. Pandemic health restrictions are subject to change though, so if you're on the VCO observer's email list, watch for continuing updates.

A reminder that although the VCO belongs to and is for the use of the members of the RASC Victoria Centre, with both weekly scheduled and unscheduled sessions run by our MiCs (Members in Charge). 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) membership@rasc.victoria.ca and we'll see you up there on the Hill some night soon.

Bruce Lane



Apollo 15: technicians from the Boeing Company conduct electromagnetic compatibility testing on the Rover, March 1971



Astronomical Term of the Month: Kellner Eyepiece

This eyepiece design was invented in 1849 by a German optician, named Carl Kellner. It's basically an improved Ramsden eyepiece (invented 1782), which was a simple design of two glass elements that was prone to chromatic aberrations. Kellner replaced one of the two convex lenses with an achromatic doublet and the Ramsden eyepiece's optical throne was usurped. Sometimes referred to as a *modern* or *achromatized* Ramsden, the Kellner offers less eye relief than its predecessor. One of the issues with the Kellner eyepiece is that they're prone to internal reflections, but that's something that's largely been solved by modern anti-reflective coatings.

Just as improvements were made in the Ramsden eyepiece to create the Kellner, it was only eleven years later when the symmetrical eyepiece design was created. In 1800, Simon Plössl replaced the second simple glass element with another achromatic doublet lens to create a new design that bears his name. Symmetrical eyepieces suffered from a lack of eye relief, especially the higher powered ones, making some of them less desirable for eyeglass wearers. Plössls have a larger field of view than the Kellner, but the Kellner has a flatter field of view and more eye relief. The manufacturing process for making Plössl eyepieces requires a higher quality of glass than Kellners, but there is still a wide range in quality between different symmetrical eyepieces, and a number of people still enjoy using high quality Kellners (possibly because of the much more generous eye relief and flatter star fields). While 5 element Plössls and other newer optical designs have largely replaced the use of Kellners in astronomy telescopes, both Ramsdens and Kellners continue to find use in other instruments, and from time to time new Kellner eyepieces are still being made for the amateur astronomy community.

Bruce Lane

In Closing



I've just completed my 25th issue as the editor of the *Victoria Centre's SkyNews* and no doubt have a few more to publish, before I turn this publication over to the next editor, like so many others have done before me. I feel fortunate that there are so many talented astrophotographers in the Victoria Centre to feature in *SkyNews* and article submissions from the membership are always welcome. Writing *SkyNews* is a lot like any other conversation, except that you're talking to someone who won't see your words for a few weeks after you begin the process of writing, editing, revising, and with some luck more editing if time allows. It's a bit like throwing a pitch across home plate for a batter who won't be there until a few weeks in the future. In a face to face conversation, you often walk away and your mind chastises you for not mentioning

something now made obvious to you, as you pointlessly edit a finished conversation with what you should have said. The nice thing about writing something over a period of a few weeks is that you get to go back to make revisions, add things you might not have initially thought of, or even change the focus of an article to better fit the narrative. If only such opportunities existed in our day to day conversations, where time and space make our personal interactions more like speed chess than the long game.

For someone used to doing public outreach in the *Before Times*, publishing *SkyNews* has become my primary means of doing outreach during the Pandemic. No more being given complimentary cookies after helping the Girl Guides cover their astronomy unit. No more teaching air cadets and setting up telescopes out at Albert Head Camp. No more standing beside my telescope for an evening up at the Plaskett Telescope, for the Friends of the Dominion Astrophysics Observatory's Summer Saturdays. No more of the numerous other events and public outreach that regularly happen as member of the RASC Victoria Centre. We're just fortunate that there haven't been any significant lunar or solar eclipses in our locale, or a lot of other major events missed out on, like the Transit of Venus, during this time of social distancing; beyond the Great Conjunction and a summer spent with a very nice comet. Of course, this lack of in-person public outreach can also make it a bit more challenging to find things to regularly write about. There are only so many articles you can write about the anniversaries of better days, before you begin to wonder, like the Peggy Lee song goes, *is that all there is?* Fortunately, we've been spoiled for online content, between the RASC National RASCana channel on YouTube, our Centre's own Astro Café going online, and now the Special Interest Groups emerging online to help ground our membership in the nuts and bolts of the different facets of being an amateur astronomer.

Other astronomy organizations on Vancouver Island have also been stepping up. The FDAO have run a number of Zoom sessions of astronomy public outreach, complete with guest speakers. The University of Victoria have been continuing their mandate of astronomy public outreach on Wednesday evenings, via Zoom presentations. The Nanaimo Astronomy Society has not allowed the Pandemic to stand in the way of the momentum they've achieved in recent years and continue to hold monthly online meetings, along with presentations to keep their membership engaged.

One thing that this pandemic is making us even more aware of is the myriad of online opportunities for networking and reaching people beyond our locales. We already had examples of increased online presence before the Pandemic, with videos of our RASC Victoria monthly meetings uploaded to our YouTube channel for shut-ins. What remains to be seen is how much of this online presence becomes a companion to our in-person activities and how much of it is set aside, once we get to the other side of this pandemic.

Bruce Lane: SkyNews Editor

Photography Credits

Cover: Full Moon, Full Moon Setting over Victoria, Feb 27, 2021, by John McDonald. Taken from the 8th floor of Ross Place, Victoria, using 24-105mm lens on Canon Ra camera (Exposure - 1/1600s, at F/4, and ISO 800).

Page 2: Apollo 15 training. Jim Irwin (left) and Dave Scott are standing on the west rim of the Rio Grande Gorge. Jim has a traverse map in his right hand and the scoop in his left. Both Dave and Jim are wearing headsets and Dave appears to be giving a verbal description to members of the team practicing 'Backroom' procedures. 11-12 March 1971. Scan by J. L. Pickering. Courtesy of NASA.

Page 3: Crop of Bruce Lane (SkyNews Editor) at 2013 RASCAL Star Party in Metchosin, by Chris Gainor

Page 3: Randy Enkin (RASC Victoria President) with Sextant, Feb 20, 2021, by Eva Bild.

Page 4: Ten-year-old, Randy Enkin, projecting the solar eclipse in Hamilton, Ontario, 1970-07-10. (Photo credit, Eleanor Enkin)

Page 4: Fifty-six-year-old, Randy Enkin, projecting the solar eclipse in Victoria B.C., 2017-08-21. (Photo credit, Randy Enkin)

Page 5: Photograph and Design of Astro Cafe Mug, by Joe Carr

Page 6: Posed Book, "Rocketman", taken in Editor's home on Feb 21, 2020, by Bruce Lane

Page 7: Apollo 15 training, Jim Irwin (left), Al Worden, and Dave Scott pose in front of a LM mock-up, surrounded by ALSEP instruments and other gear. For example, note the two helmets in front of Dave and the Rover tool pallet to the right. Scan by J. L. Pickering. Courtesy of NASA.

Page 8: Apollo 15 training, technicians from the Boeing Company conduct electromagnetic compatibility testing on the Apollo 15 flight Rover at the Manned Spacecraft Center in Houston. Photo dated 24 March 1971. Scan by J. L. Pickering. Courtesy of NASA.

Page 9: Celestron Ultima-Edge 15mm Eyepiece, Mar 20, 2021, by Bruce Lane

Page 10: "Cuckoo" the Cuckoo Maran chicken, Feb 26, 2021, by Bruce Lane

Page 12: Apollo 15, pre-flight X-ray of Jim's Right Boot. This x-ray was taken by Jack R Weakland, who worked in the NASA x-ray lab from 1968 to 1979, and told Ulli Lotzmann in 2002 that "he x-rayed everything from pipe welds to the astronaut moon boots, PGA suits etc. One purpose of this x-ray was to determine and verify that there were no sharp, foreign objects imbedded in the cloth - that is, needle points, pins etc. - that could puncture the pressure suit." Scan by Ulrich Lotzmann from a contact copy provided by Weakland. Courtesy of NASA.

Call for Article and Photo Submissions for the April Issue

SkyNews is looking for submissions of astronomy photos and articles for the April issue of our Victoria Centre's magazine. Send your submissions to editor@victoria.rasc.ca

RASC Victoria Centre Council 2021

Director Positions	Name	Email
Past President	Reg Dunkley	pastpres@victoria.rasc.ca
President	Randy Enkin	president@victoria.rasc.ca
1 st Vice President (Acting)	Sherry Buttner	vp@victoria.rasc.ca
2 nd Vice President	Marjie Welchframe	vp2@victoria.rasc.ca
Treasurer	Deborah Crawford	treasurer@victoria.rasc.ca
Secretary	Barbara Lane	secretary@victoria.rasc.ca
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Skynews Editor	Bruce Lane	editor@victoria.rasc.ca
Public Outreach	Malcolm Scrimger	outreach@victoria.rasc.ca
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NRC Liaison	James di Francesco	
FDAO Liaison	Laurie Roche	
Members at Large	Jim Hesser	David Lee
	Chris Gainor	John McDonald

