

SKYNEWS



Flaming Star Nebula by Lucky Budd, imaged over two nights (November 29 and December 4, 2021)

The AGM is but a Stream

The annual general meeting for the Victoria Centre of the Royal Astronomical Society of Canada is scheduled for 7:30pm on Monday, February 21st. Just as in recent years, as Astro Café has expanded to include monthly meetings, it has also taken on the identity of a yearly meeting. Not surprisingly, it was wisely decided to again conduct the meeting online, via Zoom. I feel with some certainty that you all know the reason why we're not conducting our annual general meeting in a banquet hall this year. That is unless you just came out of a two year long coma, in which case once you get caught up to speed you're probably demanding the hospital put you back under for a couple more years.

Unlike the past, where we enjoyed getting gussied up to eat a quality meal, for the second year in a row you'll be responsible for your own dinner. We'll leave it up to you about how formal you want to dress up, but by all means have some fun with it, with the caveat that you do actually need to wear clothes.

Other than seeing your fellow RASCals, the primary function of the annual general meeting is to present and vote to accept the annual financial report. This meeting is also where we elect new members of council. We're currently looking for people to step up and volunteer for the positions of Secretary and First Vice President. The role of the Secretary is to provide a record of meetings and making an annual activity report to RASC National on behalf of the Victoria Centre. The primary role of the First Vice President is to arrange for guest speakers for the monthly and annual meetings, as well as introduce them. Given that everything that was once a physical meeting is now done online, it's never been easier to be a part of the RASC Victoria Centre Council. There are current and past members of council who can answer your questions about your new responsibilities and provide assistance when needed. That said, there's also no law preventing previous council members from returning to council.

The other important thing about the annual general meeting is achieving quorum. If you can't make it, please contact Reg Dunkley pastpres@victoria.rasc.ca if you are all right with someone else having your proxy vote to ensure that we can conduct business, so we can continue to be a functional, non-profit society. I suggest making yourself a nice meal, having a beverage of choice handy, and whatever clothes you see fit for wearing to the hottest social event of 2022!

Bruce Lane

Editorial Remarks



Despite the difficulties of seeing beyond the clouds in the Greater Victoria Area or the rest of British Columbia for that matter, there has been a lot of goings on in space over the last month. After years of delays and numerous other budgets cannibalized to pay for it, the James Webb Space Telescope finally launched. There will be a long process of fine tuning the most advanced telescope ever built, over the first half of this year, until we start seeing any images. It has finished its lengthy voyage to get to its permanent home at Lagrange Point 2. This generational space telescope already successfully deployed its solar shield and mirrors, which unfortunately means six more weeks of winter.

NASA's Imaging X-ray Polarimetry Explorer (IXPE) that was launched last month has started collecting data on black holes, beginning with Cassiopeia A. Astra, a recent commercial space company, has been

conducting system tests on their small rocket at Cape Canaveral, in preparation for an upcoming demonstration flight. Astra was awarded a contract by NASA to deliver some of their CubeSat missions into orbit. Earlier this month, Richard Branson's Virgin Orbit company launched three commercial satellites and a pair of NASA CubeSats that are designed to magnetically dock with each other after being launched separately into Low Earth Orbit. The Pathfinder Autonomous Rendezvous and Docking Project has been in the works for over thirty year. For a fun challenge, try to find current updates on this mission!

The In this issue of *SkyNews*, we'll have more recaps from our Centre's activities, more photos from the Apollo 16 mission in the ongoing 50th anniversary of manned space exploration, 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



Betelgeuse winked two years ago. The bright red shoulder star of Orion became noticeably dimmer and then recovered over a number of months. I prepared a presentation on this red giant for our Astro Cafe (2020-01-27) and included a note about how some other cultures explain the phenomenon:

"Orion represents Nyeeruna, who creates fire-magic in his right hand, represented by Betelgeuse, to reach the Yugarilya sisters (the Pleiades). The eldest sister, Kambugudha, symbolized by the Hyades cluster, kicks sand in his face, dispelling his magic, and stops him from gaining access to the sisters. The process is described as cyclic, with Betelgeuse brightening and fading over time. The Pemon people in Brazil called Orion Zililkawai and the constellation represented a man whose wife cut off his leg. Betelgeuse's variable brightness was associated with the cutting of the limb."

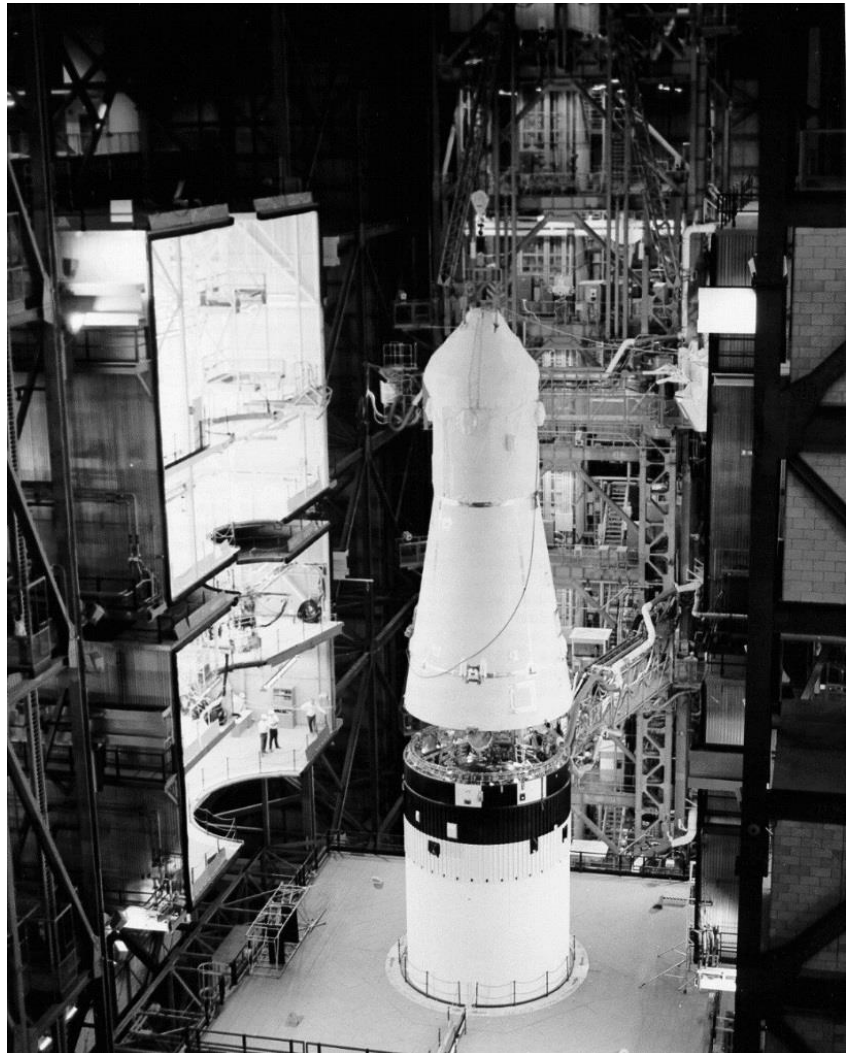
Last weekend, the Royal Astronomical Society of Canada Vice President, Charles Ennis, gave a wonderful presentation at the FDAO Star Party on the RASC's World Asterisms Project. His compilation includes 455 asterisms that include stars found in the region of the constellation Orion! At least 455 cultures from every corner of the world have looked up at the sky and were inspired to describe this same view with a story.

We amateur astronomers are part of this connection between all people over space and time. The sky continues to delight and fascinate us. We share our stories, and invent new ones. We look up.

I am so pleased to share the love of the sky with you. The earth has almost traveled a complete orbit around the sun since you have asked me to be the president of the Victoria Centre. Thank you for your support and trust in me. I look forward to the next orbit!

Look Up,

Randy Enkin, President@Victoria.RASC.ca



Astro Café: Continues Online



The weekly social gathering of amateur astronomers on Monday nights, known as Astro Café, has been continuing online. As with many groups, we're trying to find ways to still function as an astronomy society, 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/astronomy-cafe/>

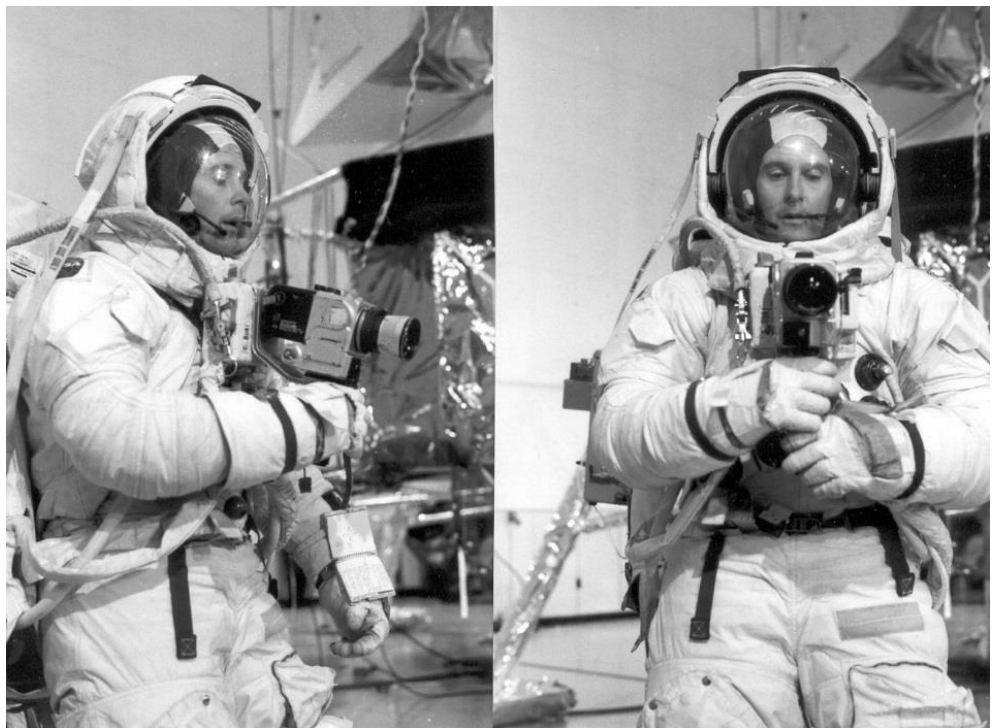
The first Astro Café of December was hosted by Chris Purse, who discussed the upcoming talk by Dr. Robert Thirsk. Joe Carr showed some images from the recent total solar eclipse in Antarctica that were taken by research teams and from a satellite; Randy Enkin explained the use of the Astro Compass currently in his possession, with Peter Kabel discussing it further. Dave

Robinson showed some images from RASC Edmonton; Chris Gainor gave some updates on the James Web space telescope and talked about the distribution of his book about Hubble; David Lee gave an observing report and talked about the difficulties they're having with the weather to image Comet C/2001 A1 Leonard; and Lauri Roche gave update on the 2022 RASC Calendars and the FDAO e-store.

The next Astro Café began with Dave Robinson showing comet images from RASC Edmonton; Dave Payne presented his images of the Pleiades, the Owl Cluster NGC 457, and the Cave Nebula; Lauri Roche and Chris Gainor talked about the James Web Space Telescope the much awaited RASC Calendars; and Randy started a general discussion about Comet C/2001 A1 Leonard, next week's Astro Cafe, and the fact that there are Victoria Centre Council vacancies that need to be filled.

The third and last Astro Café of December (also the last one of 2021) started out with Chris Gainor giving updates about the James Web space telescope, Parker Solar Probe, and RASC National. Ken McGill and Brian Barber showed some of their astrophotography; Dorothy Paul gave a presentation on *My Astronomy Sketch of the Year 2021*; Nathan Hellner-Mestelman showed some cross-hatched sketches he's done of the Moon and talked about sidewalk astronomy; and David Lee gave report on his astronomy activities (variable star observing, RASC National NOVA program, SIGs, working with the Technical Committee, and collaborations with the FDAO). Michel Michaud gave an update on the building of the MCD Observatory and showed some early imaging from his site. It's a more robust version of the Victoria Centre Observatory, built to survive the somewhat harsher Quebec winters.

Bruce Lane





Orion Nebula by Lucky Budd, imaged over two nights (December 2nd and 4th, 2021)

Special Interest Groups

Getting Started in Astronomy

Members of the group continued exploring objects of interest by constellation, working their way through the seasonal favourites. We have had a number of requests for getting started in sketching, to broaden our methods of recording observations. We will be spending some time on a primer. Other areas of interest will include double stars, variable stars, and lunar occultations. For more information on this group, please contact David Lee at david@victoria.rasc.ca

Astrophotography

The Astrophotography SIG is now led by David Payne. We thank John McDonald for organizing and keeping this group motivated. This group is very popular and has offered a place for members to learn and get excellent feedback on a very challenging activity. For more information about this group, please contact David Payne at dapayne@shaw.ca.

Electronically Assisted Astronomy

The EAA group gives members an opportunity to talk about techniques and equipment that can support electronically assisted observing. We have received a request from another RASC Centre about outreach, based on video streaming, so this topic is picking up interest as a means of showing the public extended views of the sky. For more information on this group, please contact David Lee at david@victoria.rasc.ca

Makers

The Makers SIG continues to focus on individual member projects. A discussion was initiated about developing some solar projection units for public outreach. This has proven to be a favourite piece of equipment for public outreach. Gary Sedun has requested help in designing the structures for his equipment that he has brought back from Arizona. For more information about this group, please contact Jim Cliffe at jim@victoria.rasc.ca.

David Lee



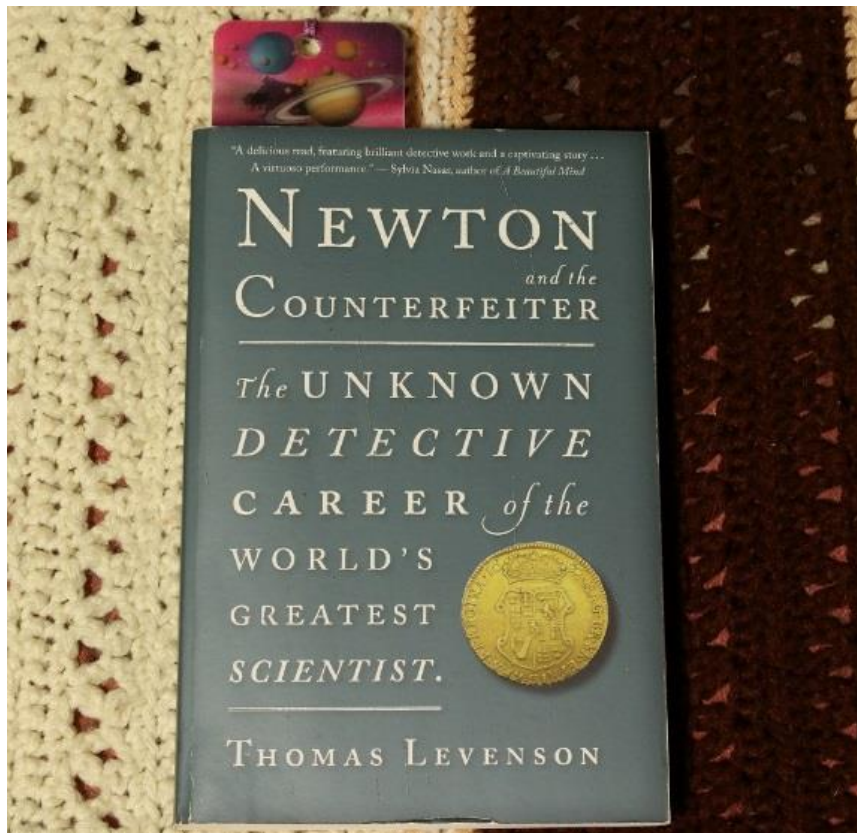
Apollo 16 Backup Crew Fred Haise (left) and Ed Mitchell during EVA training, undated, Courtesy of NASA

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 and to make a book delivery request, please contact Alex Schmidt at: 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 at your local bookstore.

This month we're completing a trilogy of unrelated and unconventional biographies of early, ground breaking cosmologists. We started with Dava Sobel's *A More Perfect Heaven*, with a large portion of this Nicolaus Copernicus biography told as a two part stage play script. Then we talked about Johannes Kepler from an almost purely historical perspective, with James Connor's *Kepler's Witch*. Now we're taking a closer look at *Newton and the Counterfeiter*, by Thomas Levenson.



Thomas Levenson is a Professor of Science Writing at the Massachusetts Institute of Technology. He has published six books about science and economics, has been published in numerous newspapers and magazines, as well as working on a number of documentaries in the medium of film. You can even follow him on his prolific Twitter account if you want, where he probably needs to spend much less of his time on if we're going to see more of his books written anytime soon. Of course the same could be said of many of us, with regards to our time being frittered away, *doom scrolling* on social media.

This biography certainly cuts a different path from traditional biographies of Isaac Newton, in that it frames the story of his life around investigating counterfeiters, while he was employed by the Royal Mint. I'm certainly not the first person to wonder about a link between Isaac Newton and the fictional character of Sherlock Holmes, given the many similarities of the two reclusive polymaths (minus the opium use in the case of Newton). This despite Sir Arthur Conan Doyle repeatedly stating that the character was based on a Scottish forensics science pioneer by the name of Joseph Bell. The word *detective* didn't even exist when Newton was alive, only coming into use in 1828. There were several earlier detective works that may have influenced the creator of one of the most timeless criminal investigators in fiction. Edwin Allen Poe wrote the first detective stories, featuring the character C. Auguste Dupin, who was based on the real-life French detective pioneer François-Eugène Vidocq. A few decades later Émile Gaboriau wrote a series of detective novels, about the adventures of Monsieur Lecoq and Père Tabaret. Henry Cauvain's *Maximilien Heller* has a polymath detective who strikes a very close resemblance to Sherlock Holmes, right down to having his story told by a doctor. *Maximilien Heller* was published sixteen years before Sherlock Holmes. And you thought the process of our evolving understanding of cosmology was complicated. *Newton and the Counterfeiter* is well worth reading and it's available by order from your local bookstore.

Bruce Lane

Hill and Dale (Observing on the Island)



Other than the charming, light snowfall of a White Christmas, there wasn't a lot to be excited about, with regards to the weather in December. It rained, it was cloudy, it snowed, and it got very cold. We had some of the coldest temperatures I've witnessed in Greater Victoria since the 1990s. The first snowfall was that powder snow they get in other places in Canada, but before long we were back to the same backbreaking wet snow we dread shoveling on the *Wet Coast*. Sometime through the long month of clouds, there were at least a couple nights of clear skies. That was when Lucky Budd worked on the images in this month's issue, including the Horsehead and Flame Nebula imaged on Dec 26th and 31st (seen left).

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. 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 and we'll see you up there on the Hill one of these nights in the not too distant future.

Bruce Lane

In Closing



We started the month off with digging ourselves out from the latest snowfall and not that nice fluffy snow we previously had. The snow is being washed away by another, less devastating *atmospheric river*, a term most of us had no awareness of until one derailed our transportation infrastructure. I find that digging a long trench through the snow is useful to divert potential flood water from the melt, as well as break things up to give a head start to the melt. There's a substantial difference to how fast the snow vanishes when you do; especially when you live in a micro-climate than has less than abundant sunlight due to the surrounding forest.

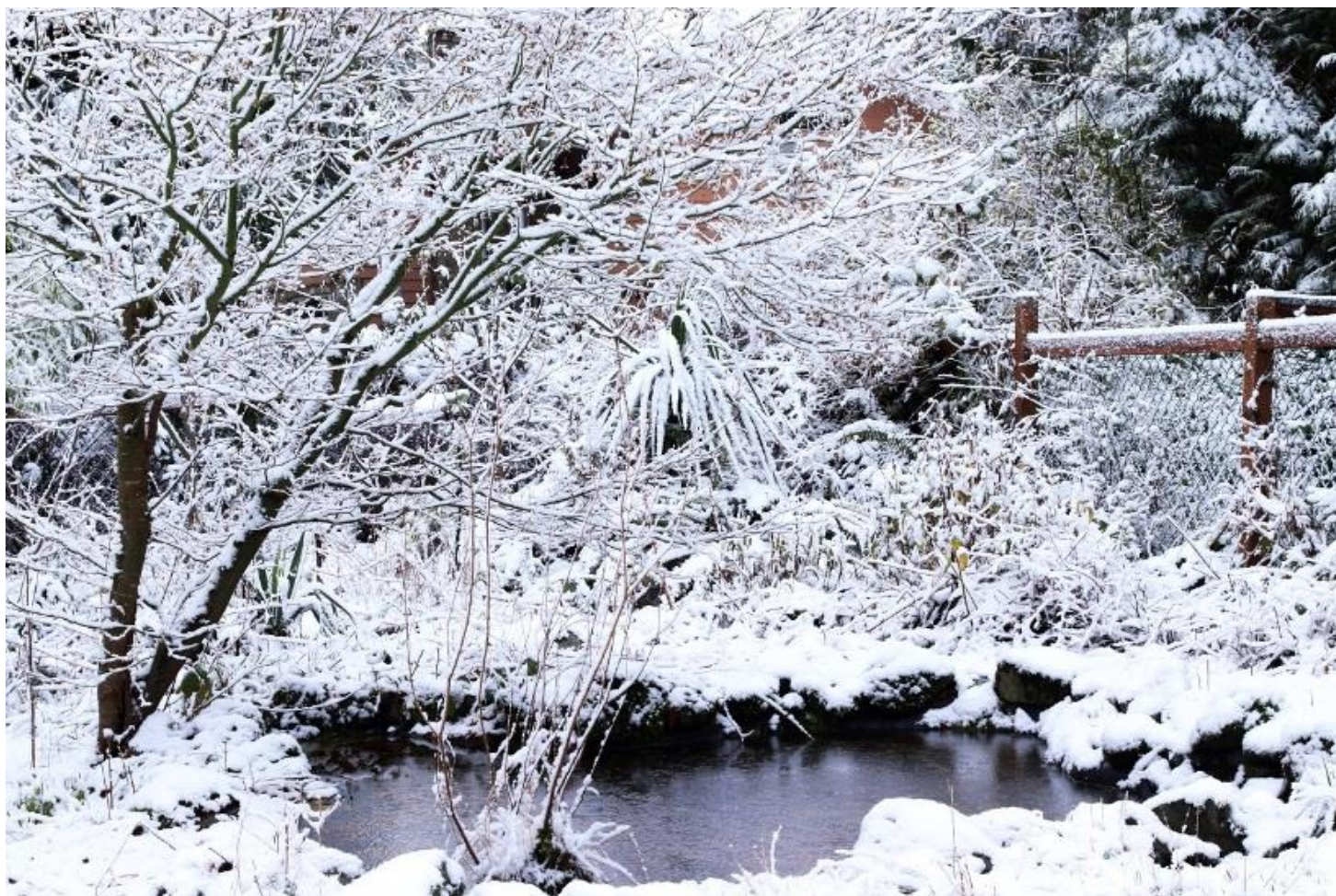
Now we're dealing with a kinder, gentler variant of covid-19, which was only kinder and gentler until you did the math and watched it completely overwhelm our healthcare system. It would be hard to imagine the state of our country if the vast

majority of us weren't vaccinated. Unfortunately, you don't have to use your imagination. You just have to look at all the less fortunate nations that have been victims of vaccine nationalism. Even if they're doing everything right, the lack of access to vaccination has had devastating results. It's even worse where low level government officials and healthcare providers have to fight the pandemic, business interests, and their own government to protect citizens. A lot of vaccines sent to struggling nations are shipments sent to them because their *best before dates* are just about to expire. It didn't help things when the Canadian government cracked, under the pressure of extreme vaccine nationalism from south of the border, to dip into an international system set up for developing nations (Covax), requesting 1.7 million doses of covid vaccine that wasn't meant for us.

These larger unvaccinated populations are the ideal place for the next variant to emerge and make it a less than ideal time to travel. It won't be long before another variant is competing for gold in the *Viral Olympics*. Also, I wouldn't recommend traveling to go see the Olympics or doing any traveling at all. Meanwhile, despite the Canadian government warning against non-essential international travel during a pandemic, in December alone, 742 417 Canadian passengers returned home on airline flights from other countries. Last weekend, anti-science protestors, with the goal of overthrowing the federal government featured in their unhinged manifesto, decided to occupy the streets of our nation's capital and terrorize its citizens. A lot of people saying that *this isn't their Canada* don't seem to realize that this is very much their Canada and that's the problem.

Going into February there's a lot to look forward to on the astronomy calendar. Did I mention that there's a RASC Victoria Centre annual general meeting at 7:30pm on Monday, February 21st? For those who have never tried to observe Mercury, the closest planet orbiting the Sun will be at its longest western elongation on February 16th. You still need to be careful about pointing a telescope that close to the Sun, but it's a great opportunity for a seldom observed planetary target. A lot of people prefer using a #21 Orange Filter for observing Mercury. Meanwhile, the weather is starting to feel a bit warmer and the days are getting longer, as we each look forward to that preferred personal balance between bearable cold and enough darkness for observing the night sky.

Bruce Lane: SkyNews Editor



Photography Credits

Cover: Flaming Star Nebula over two nights (Nov 29 and Dec 4, 2021), by Lucky Budd, from backyard, using Evolution 8 SCT, with Hyperstar and Idas NBZ filter.

Page 2: 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 3: Apollo 16, spacecraft after rollback and de-mating due to RCS leak. Jan 25, 1972. Scan by Kipp Teague. Courtesy of NASA.

Page 4: Photograph and Design of Astro Cafe Mug, by Joe Carr

Page 4: Apollo 16, Ed Dempsey photographs show Charlie Duke training with the RCU-mounted Hasselblad. Scan by Frederic Artner. Courtesy of NASA.

Page 5: Orion Nebula imaged Dec 2 and 4, 2021, by Lucky Budd. Using Evo8 with Hyperstar3 – 760, 25 second subs

Page 6: Apollo 16, Back-up Crew Fred Haise (left) and Ed Mitchell during EVA training. Mitchell is carrying the tool gate, indicating that they are loading the LRV. Undated scan by Andrew Chaikin. Courtesy of NASA.

Page 7: Posed Book, “Newton and the Counterfeiter”, taken in Editor’s home on Jan 31, 2022, by Bruce Lane

Page 8: Horsehead and Flame Lucky Budd Dec 26-31, 2021 using Evolution 8 SCT, with Hyperstar and Idas NBZ filter. 5.5 hours of integration, using an Alt-Az mounted telescope.

Page 9: Blizzard the Speckled Sussex Hen, Dec 25, 2021, by Bruce Lane

Page 10: Snowy Pond and Japanese Maple, Dec 25, 2021, by Bruce Lane

Page 12: Apollo 16 Training, *John Young uses the right hand tape in practice deployment of the LRV. Charlie is off-camera to the right and has light tension on a cord attached to the center of the aft section. The aft chassis section and wheels have fully deployed. Note the red-and-white-striped cooling hose arcing down from the ceiling, and the comms cable taped to the cooling hose. A tech standing behind John's PLSS keeps the cooling hose out of his way.* Image filed January 28 1972. Scan by Kipp Teague. 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

RASC Victoria Centre Council 2022

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
Officer Positions		
Librarian/UVic Liaison	Alex Schmid	librarian@victoria.rasc.ca
Technical Comm Chair/Sys Admin	Matt Watson	admin@victoria.rasc.ca
Skynews Editor	Bruce Lane	editor@victoria.rasc.ca
Public Outreach	Malcolm Scrimger	outreach@victoria.rasc.ca
Schools Program	Sid Sidhu	schools@victoria.rasc.ca
Telescopes	Sid Sidhu	telescopes@victoria.rasc.ca
National Representative/ Pearson College Liaison	Bill Weir	nationalrep@victoria.rasc.ca
National Representative	Sherry Buttner	Nationalrep2@victoria.rasc.ca
Light Pollution Abatement	Dave Robinson	lighting@victoria.rasc.ca
Membership Coordinator	Chris Purse	membership@victoria.rasc.ca
Observing Chairperson	Jim Stillburn	obschair@victoria.rasc.ca
Website Content	Joe Carr	web@victoria.rasc.ca
NRC Liaison	James di Francesco	
FDAO Liaison	Laurie Roche	
Members at Large	Jim Hesser	David Lee
	Chris Gainor	John McDonald

