

SKYNEWS



November 19th Lunar Eclipse by Nathan Hellner-Mestelman

Lunar Eclipse Lost

We had an epic partial eclipse on the evening of November 18th or morning of November 19th, depending on how you perceive the passage of time. It was a partial eclipse so close to being a full eclipse that many observers wouldn't notice the difference. Of course it probably would have been a lot more spectacular if it hadn't been for the heavy clouds and rain. As many amateur astronomers can attest, we had less than ideal conditions for this celestial event.

Only one member of RASC Victoria decided that the simple matter of appalling weather wasn't going to stop them from taking in the lunar eclipse from the Greater Victoria Area. Nathan Hellner-Mestelman was out doing his best to capture the event, despite the heavy clouds and rain, and the challenges of keeping optics dry while imaging under extremely challenging conditions.

Bruce Lane

Editorial Remarks



Merry Christmas, Happy Holidays, and Happy New Year - is what my snow shovels said to me. Everyone has been doing their best to update everyone else under the same skies, with their pictures on social media of what snow looks like and there certainly are a lot of pretty pictures circulating out there. The light dusting we got for a White Christmas was a lot more popular than the heavier snowfalls that followed. Given that we've been getting more snow in recent years than we used to, it's important to have a good selection of snow shovels. Being 18.79 decimeters tall (*I felt that we made a horrible mistake in the transition of imperial to metric by using less relatable centimeters or meters to measure the height of people*), I prefer a long handled shovel. I have to take a knee to use those tiny shovels people think are useful for shoveling snow. I use ice shovel of unusual size, with a scoop that sits a family of four, to do the preliminary work. Then I swap to a long handled ice scraping shovel.

For steps, I'll put down some salt afterwards. You have to be careful not to use any of the more toxic chemical salt brands out there that will burn through concrete. If you're wondering where the astronomy content is in this paragraph, so am I. Opportunities for amateur astronomers to enjoy their hobby have been rare of late. Snow shovels though? I'm getting a lot of quality time on my snow shovels.

I'm still hoping to get the *Star Hop* column started. I've been inviting experienced observers to take turns as guest writers, where they'll point out a less observed target currently available in the night sky. The parameters for these targets is that they can't be a Messier object or one of the more commonly observed NGCs, and it has to be something readers will be able to see from Greater Victoria at the time that issue of *SkyNews* is published. What I'm looking for is a short article about how to find the object and a little bit of background information about it. A picture isn't required, but a scan or image of a chart, or even a simple drawing, would be helpful to assist observers when they are looking for that object. Let me know if you're interested in sending in a submission for a future *Star Hop* column. 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*.

Bruce Lane: SkyNews Editor

President's Message for December



Ah 2021. What a strange trip around the Sun! I am writing this letter on the day of the winter solstice. There is a waning gibbous moon shining high in the east, when I go to bed, and it is high in the west to greet me in the morning. I take great solace in watching and thinking about the dependable motion of the Earth through the Universe, while so much of life and news this year has left me feeling unsettled.

Nearly as dependable as the astronomical objects has been you, our astronomical community. I am so pleased when I see the 30 or 40 of us gather each Monday evening at our virtual Astro Café. We are an appreciative and supportive community. Look at all the different skill sets and experiences that get shared every week. And look at those beautiful photos and sketches that we have created. I particularly wish to mention the personal observatories (I know of 3!) that are getting designed and built by members of our centre, as well as the fantastic work by our technical committee in upgrading the Victoria Centre Observatory. Our group has motivated me to try new astro-

projects – whether observing sunspots with a solar telescope borrowed from the Centre (thanks to the capable curation of our telescope collection by Sid Sidhu), or star hopping to those *faint fuzzies* that you deep space observers like. And I love the expressions of appreciation when I show off my lunar sketches to our crowd.

Do remember that our community survives on the strength of our volunteerism. We have a specific requirement this year for a new secretary and a new vice president. Don't feel you aren't up to the job! I still feel like a newbie in the role of president, but there is no shortage of good council from the many past executives who continue to be active. Come join us on the inside, and you will feel even more affection for the Centre.

I wish us all a fruitful and fulfilling new year, with many clear skies.

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 November was hosted by Chris Purse. Things kicked off with Dave Robinson sharing some images from RASC Edmonton. David Lee discussed upcoming the RASC special interest groups and the upcoming Sky Brightness Survey, including the use of digital cameras for light metering. Brock Johnston showed some astrophotography of the Ghost and California

Nebulae; Joe Carr did a short presentation on astrophotography images using data from Slooh telescopes; Laurie Roche talked about recent and upcoming news from the FDAO and the RASC National Public Outreach eclipse group; and Chris Gainor talked about reports coming in about the Hubble and James Web Space Telescopes.

November 8th's Astro Café began with Jeff Pivnick talking about Dr. Robert Thirsk, the speaker for the December 13th meeting, and discussion about including other RASC centres. Dave Payne shared two images of star clusters from earlier in the year; Marjie Welchframe continued with her series on Women Astronomers, this time featuring Dr. Nathalie Ouellette; Dave Robinson showed some more images from RASC Edmonton; Lauri showed off a recently donated astro-compass and talked about upcoming FDAO events; John McDonald discussed a tool for astrophotography post production and how similar machine learning's use in fighting epidemics; and Chris Gainor gave some more updates on the Hubble and James Web Space Telescopes.

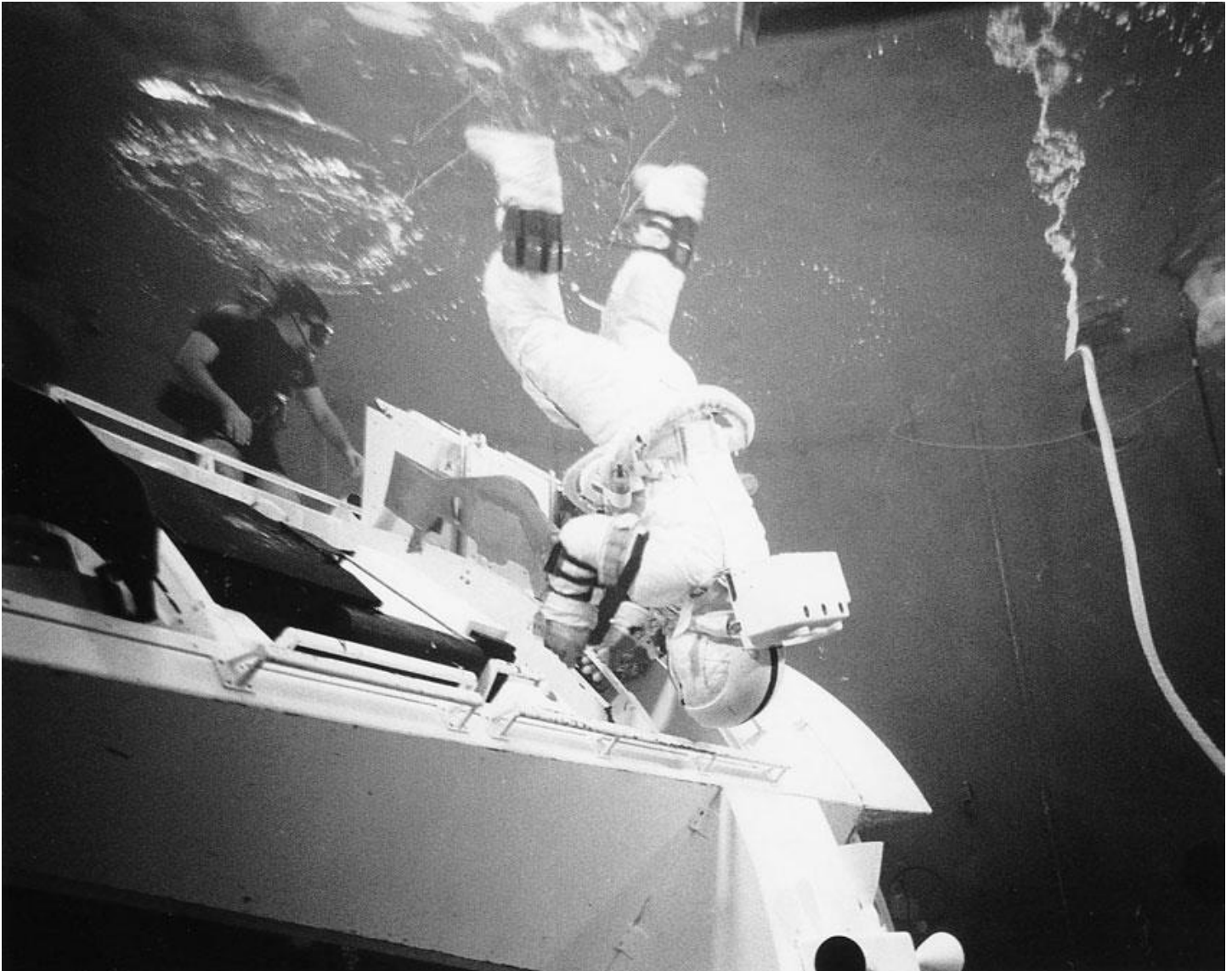
The third Astro Café of the month was hosted by David Lee and featured a presentation by guest speaker Dr. Emily M Levesque: *The Last Stargazers*. Dave Robinson share more astrophotography from RASC Edmonton; Laurie talked about RASC publications for sale, and upcoming FDAO and JWSS events; David and others talked about the upcoming lunar eclipse; Nathan Hellner-Mestelman and Lauri Roche discussed the Global Star Party; and there was another reminder about Dr. Robert Thirsk being the guest speaker for the December 13th Astro Café.

The next Monday Zoom meeting was hosted by John McDonald and he started things off by giving an introduction to the Astrophotography SIG. Martin Gisborne gave a presentation on his journey in astrophotography, expanding on the short article comparing two images in the November issue of *SkyNews*; Joe discussed Southern Sky Celestial Objects; Alec Lee talked about wide field astrophotos and planetary images; Brock shared his images of the Andromeda Galaxy and Rosette Nebula; and John showed some reprocessed images from previous data. Lauri reminded everyone about RASC publications for sale, as well as upcoming FDAO and JWSS events; Dave Robinson shared more RASC Edmonton images; Chris Gainor gave more updates on the James Web and Hubble space telescopes; and Randy Enkin showed a new lunar sketch.



The last Astro Café of the month was hosted by Chris Purse and began with the subject of the need for more hosts to run Astro Cafe; Lauri gave an update on the 2022 RASC Calendars; Marjie gave a presentation on Dr. Laurie Rousseau-Nepton; and Dave Robinson shared some more images from RASC Edmonton. Astro Café then turned into a free for all with members talking about their favourite books on astronomy (*some of which have been featured in the monthly SkyNews book reviews*). Chris Purse discussed Astronomy Cafe hosting and recording opportunities and Chris Gainor closed out the evening with more updates about the James Webb and Hubble space telescopes.

Bruce Lane



Apollo 16 Training. Ken Mattingly in WET-F tank at MSC. Scan by J.L. Pickering, not dated. Courtesy of NASA.

Special Interest Groups

Getting Started in Astronomy

Members of the group continue exploring objects of interest by constellation. This month we covered Taurus and talked about different cultural interpretations. The topic of object lists came up and the desire to have lists that are beginner friendly. For more information on this group, please contact David Lee at david@victoria.rasc.ca

Astrophotography

The Astrophotography SIG has been led by John MacDonald, but he will be stepping down as of the New Year. We thank John for organizing and keeping this group motivated. Joe Carr will act as chair until we establish a new lead. A recent presentation at Astro Cafe shows the interest and the quality of the images produced by members of the SIG. For more information about this group, please contact Joe Carr at web@victoria.rasc.ca.

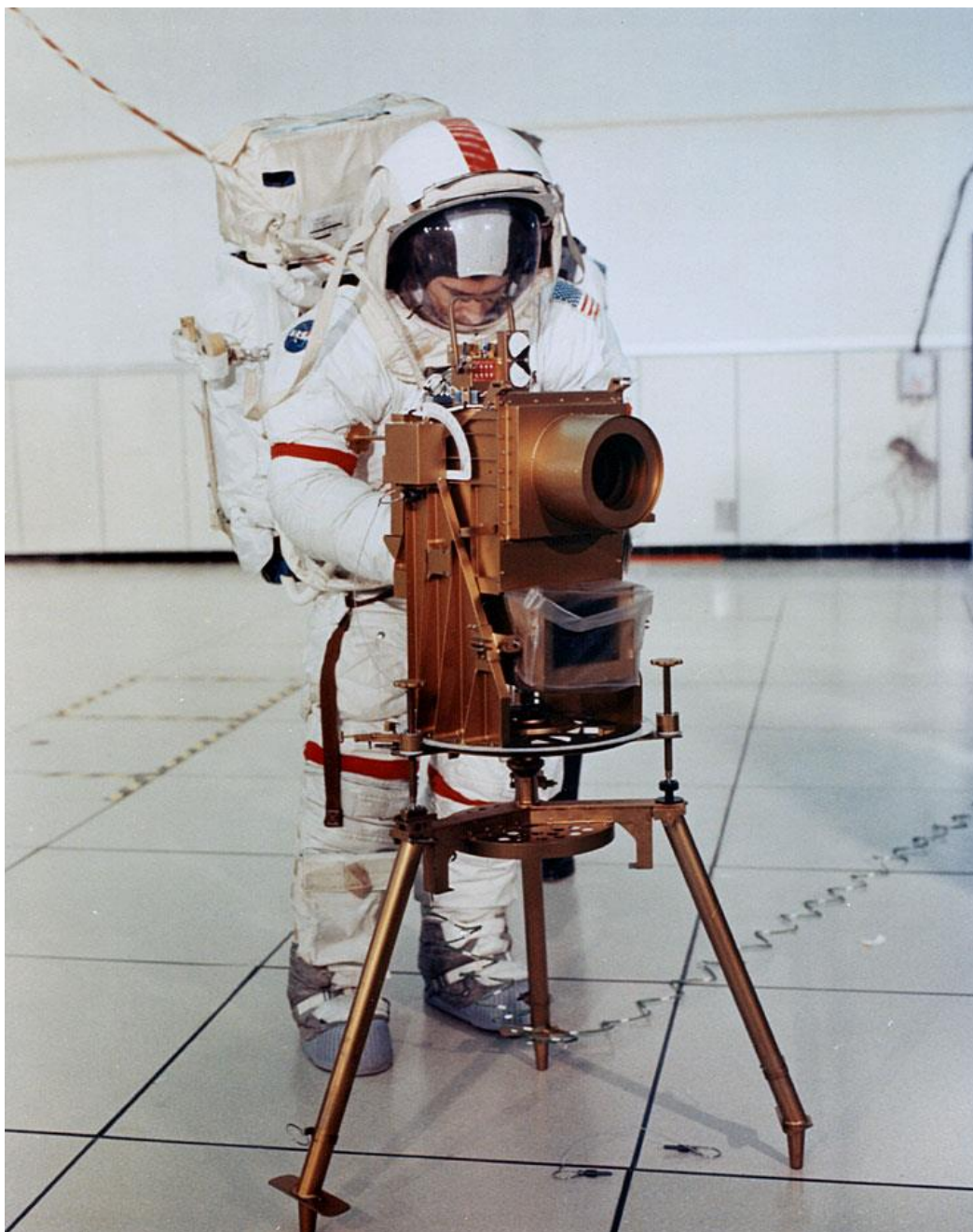
Electronically Assisted Astronomy

The EAA group continues to talk about techniques and equipment that can support observing electronically assisted. In the New Year we will talk about new offerings like the Unistellar Evoscope and what one could assemble on their own for EAA. For more information on this group, please contact David Lee at david@victoria.rasc.ca

Makers

The Makers SIG continues to focus on member projects. With the focus on revisiting our *Sky Brightness Survey*, we will be looking at how this group can contribute to this initiative. For more information about this group, please contact Jim Cliffe at jim@victoria.rasc.ca.

David Lee

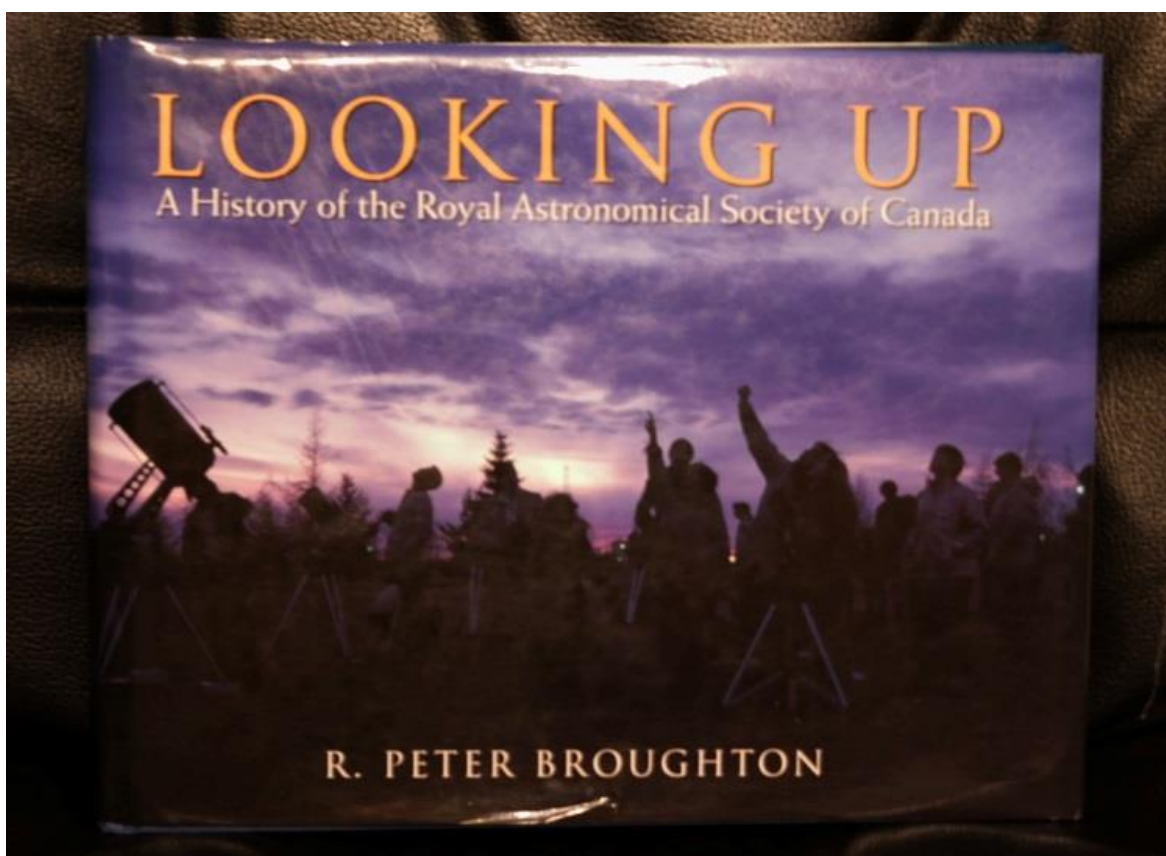


From the Library

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, but this month it's a book you can also find in the RASC Victoria Library.

This month we're taking a closer look at *Looking Up: A History of the Royal Astronomical Society of Canada*, by R. Peter Broughton. If you were looking for the modern definition of meta it might be a RASC Centre newsletter reviewing a RASC book about the history of the RASC. In a sense, it's navel gazing about a book about navel gazing. This book was also published in 1994, so it's the perspective of a history that's frozen in that moment. That was the year that the original NAFTA came into effect, Nelson Mandela became the President of South Africa, and the *Netscape Navigator* web browser was released to a world trying to figure this Internet thing out. Pulp Fiction was showing at the movie theatres and Carl Sagan's *Pale Blue Dot* was in the book stores. The BC Lions won the Grey Cup and the Canucks came within a game of winning the Stanley Cup, resulting in rioting in downtown Vancouver. It could be argued that a few things have happened since then, including in the RASC.



Not surprisingly, a lot of this book is primarily focused on Toronto. RASC and its predecessor (the Toronto Astronomical Club) were founded in Toronto. The author, Peter Broughton, is a long-time member of the RASC Toronto Centre. There's going to be a heavy focus on the goings on in Toronto, something even the author is aware enough about to make a joke about it. There are certainly moments that remind you of watching *Hockey Night in Canada*, where the subject is someone's legacy in another Centre, but the focus is on how that relates in any way to Toronto. It's certainly an ambitious task to properly cover the whole of the RASC, without having resided for at least some time in each of the Centres or creating a history so large that it becomes a six volume set. There is even a chapter dedicated to other regions of Canada, such as the centres in Ontario outside of Toronto. There is an actual chapter dedicated to Western Canada, although there are numerous references to Toronto even there. Jack Newton's image of NGC 2024 is on the back cover.

There is some RASC Victoria content to be found here. This book talks about a centre astronomy summer course taught on Saturdays, starting in 1930. A few years later the Victoria Centre RASCals were regularly up at the Dominion Astrophysical Observatory with their telescopes doing public outreach.

The book is filled with mini biographies, but they need to be expanded on. There's a lot of minutiae that is of interest to people who like administrative history. As the Muse of Astronomy, Urania was popular with some of the early founders of RASC, given that classical educations were more common at that time. The seated figure of Urania was chosen for our society's seal, with the motto: *Quo Ducit Urania* ("Where Urania leads, we follow"). Unattached members of the RASC were initially added to the Toronto Centre's membership list, on the excuse that the national headquarters was there, but that was changed in 1930. Unattached members in Cape Breton even organized the RASC General Assembly in 1989! The RASC Observer's Handbook was used as a navigation teaching aid for pilots during World War II. There are a lot of little nuggets like that in this volume. *Looking Up* is an informative book that's available for you to borrow from the RASC Victoria Library.

Bruce Lane





Pleiades, imaged on November 12th, by Lucky Budd

Hill and Dale (Observing on the Island)

It rained. Then it rained some more. Rain barrels must have thought they won the lottery, astronomers not so much. It seemed like every month, in the second half of this year in British Columbia, we got introduced to a new weather term to keep things fresh. November was all about the *atmospheric river*. The washing out of major highways and flooding of towns and farms happened as close to us as Cowichan. When we keep hearing about once in a century weather events happening on a monthly basis, it doesn't take a genius to figure out that things are not as they should be.

Despite the dreadful downpour, there were a few moments of clear skies for those lucky enough to witness them. There are times when the sky clears up late at night, leaving you to stare up in wonder and confusion at the unusual spectacle, before the clouds returned to dominate the sky. Lucky Budd managed to get an image of the Pleiades (*seen on previous page*), from his backyard, during an opening in the clouds on November 12th.

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.

Bruce Lane



Apollo 16 Saturn V rocket roll out, December 13th, 1971

In Closing



Well, I managed to get the December issue of *SkyNews* out the door before the ball dropped in Time's Square. It's a particularly busy time of year for me, punctuated by a lot of snow shoveling. We're slowly clawing our way back from the darkness of the winter solstice and moving into the traditionally colder months of January and February. That said, the recent cold snap in Victoria had the coldest temperatures I can remember in these parts since the 1990s. I have it on good authority that the Geminids meteor shower is every bit as spectacular as the Perseids in the summer, but the absence of clear skies continues to make it an elusive experience in Victoria during December.

Things are not going well on the Pandemic front. Our politically appointed public health authorities are dropping the ball at the worst possible time. After some provincial governments complained about not having any rapid test kits available to the public, the federal government pointed out that the provincial governments were sitting on millions of them. The following scramble to distribute millions of test kits without much of a plan has yielded uneven results, with British Columbian health authorities performing poorly. When faced with fifth wave from the newest variant of covid-19, our government

went on holiday. They've delayed the distribution of booster shots and are scrambling to figure out who should get them first, as if they haven't been dealing with the Pandemic for nearly two years. Only one of the people I know getting sick has been tested. Not only are the official numbers only a fraction of the real number of cases, but it looks like the hyper infectious nature of this variant has surpassed our health authorities ability to effectively do testing and tracing. The only reason we're not referring to ourselves as Covid Columbia, remains the reality of even worse leadership elsewhere in the country. Alberta is so badly managed that they no longer have ambulances available to respond to emergencies in their cities. If you have a medical emergency in Calgary, chances are the ambulance responding is driving there from Canmore or Banff. Calgary has become an emergency services black hole, into which are drawn all the rural ambulances from hundreds of kilometers around it. In BC, we've decided to lower the two week quarantine to seven days and in Alberta, they're thinking about embracing the US CDC's new standard of five day quarantines, despite the loud objections of epidemiologists. The only reason people aren't calling out Saskatchewan's provincial government more, for doing an even worse job, is that condemning Alberta is more of a national pastime.

The media latching onto early reports from South Africa that this variant is mostly harmless hasn't helped things. The problem with the data is that they were comparing previous variants effecting a mainly unvaccinated population, against Omicron's effect on a mainly vaccinated population. Higher rates of vaccination are going to skew our perception of the strength of new variants, provided we continue to roll out effective booster vaccines in a timely manner. If the Omicron variant is much more contagious than any previous variant, for it to not overwhelm our healthcare system it has to be much, much less severe.

As we stagger from variant to variant, the fact that there are still overly entitled and selfish individuals conducting unnecessary travel is what is keeping us in this cycle. You need food, water, clothing, and shelter. You don't need to travel on vacation, often to soak up some sun amongst a population that is likely a victim of vaccine inequality and a breeding ground for the next variant or in a population with strong anti-vaccination sentiment. If you're not traveling as a specialist or researcher for work or for medical reasons, you should be ashamed of yourself. You're the ones bringing home new variants as unwanted souvenirs and stabbing exhausted healthcare workers in the back. Canadians are either going to have to figure out what personal responsibility is and elect competent government during a public healthcare

emergency, or we're eventually headed for a societal collision with the *Canadian Emergency Act*. *We're all in the same boat*, as the tired line goes, but some days it feels a bit more like the *Titanic*. Those of you sipping wine in the first class dining room might want to take a moment to think about the less fortunate people in steerage. They can smell the steaks cooking through the air vents.

Despite the feeling that the World is going to *hell in a handbasket* and not that nice handbasket you saw on *Etsy*, professional and citizen astronomers are continuing to gather online and virtually. In RASC Victoria, Astro Café has continued on without the usual summer break since the beginning of the Pandemic. We also have our astrophotography being hosted on Zenfolio and our Special Interest Groups, to help offset the lack of face to face experiences. We've even had our centre newsletter published without pause since the beginning of the Pandemic. In the New Year, RASC Victoria will have a couple vacancies on our council for the positions of secretary and vice president. It's a great opportunity to take your membership in our centre to the next level.

Elsewhere, RASC National still has their *RASCanada* channel on YouTube. The Friends of the Dominion Astrophysics Observatory are a bit less active during the winter, but still have monthly virtual events planned over the next few months, with the next one scheduled for January 22nd. The Department of Astronomy at the University of Victoria are continuing to fulfill their mandate of public outreach, with virtual sessions on Wednesday evening returning after the holiday break sometime in January (*the UVic Observatory Facebook page is a good place to look for updates*). Across the snowy Malahat and further north up the Island, the Nanaimo Astronomy Society continues to hold monthly meetings online for their members. While scientists and amateur enthusiasts continue to put in the time to make content available in numerous scientific disciplines, there's really nothing quite like taking your own optics out under the night sky and taking in the sights. Hopefully, we'll get some clear skies before too long so more of us can do just that.

Bruce Lane: SkyNews Editor



Photography Credits

Cover: Partial Eclipse in Bad Weather, Nov 19, 2021, by Nathan Hellner-Mestelman

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 training. John Young (left) deploys the thermal shield on the Passive Seismic Experiment during a final review. Watching are Charlie Duke (next right), engineer Hans Rudolph, and Back-up Commander Fred Haise. Picture released Dec 8 1971. Scan by Frederic Artnier. Courtesy of NASA.

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

Page 4: Apollo 16 training. John Young (left), Charlie Duke, and T.K. Mattingly pose on the steps of a CM simulator at the Cape. Dec 3, 1971. Scan courtesy J.L. Pickering. Courtesy of NASA.

Page 5: Apollo 16 training. Ken Mattingly in WET-F tank at MSC. No Date Given. Scan by J.L. Pickering. Courtesy of NASA.

Page 6: Apollo 16 training. John Young works with the astronomical Far UV Camera/Spectrograph during indoor training. Dec 21 1971. Scan by Ed Hengeveld. Courtesy of NASA.

Page 7: Posed Book, "Looking Up", taken in Editor's home on Dec 30, 2021, by Bruce Lane

Page 8: Apollo 16 training. John Young (left) uses the tongs to put a rock sample in a bag held by Charlie Duke. On the Moon, with the suits pressurized, it was difficult for the astronauts to raise the tongs very high and bagging was easier if the person holding the bag held it at knee height. Good view of Charlie's cuff checklist. The compressors and tanks, in the background at the upper right, supplies air for the suits. December 22, 1971. Research by J.L. Pickering. Courtesy of NASA.

Page 9: Pleiades, Nov 12, 2012, by Lucky Budd

Page 10: Apollo 16 Saturn V rocket roll out, Dec 13, 1971. Scan by J. L. Pickering. Courtesy of NASA.

Page 11: Cooped Up! Chickens not happy about the snow, Dec 25, 2021, by Bruce Lane

Page 12: Tea Roses in the Snow, Dec 25, 2021, by Bruce Lane

Page 14: Apollo 16 training. Charlie Duke appears to be taking a practice pan, primarily for the benefit of the assembled media photographers. Dec 22, 1971. Scan by J.L. Pickering. Courtesy of NASA.

Call for Article and Photo Submissions for the January Issue

SkyNews is looking for submissions of astronomy photos and articles for the January issue of our Victoria Centre's magazine, including experienced observers contributing to our not yet launched *Star Hop* column. Send your submissions to editor@victoria.rasc.ca

RASC Victoria Centre Council 2021

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FDAO Liaison	Laurie Roche	
Members at Large	Jim Hesser	David Lee
	Chris Gainor	John McDonald

