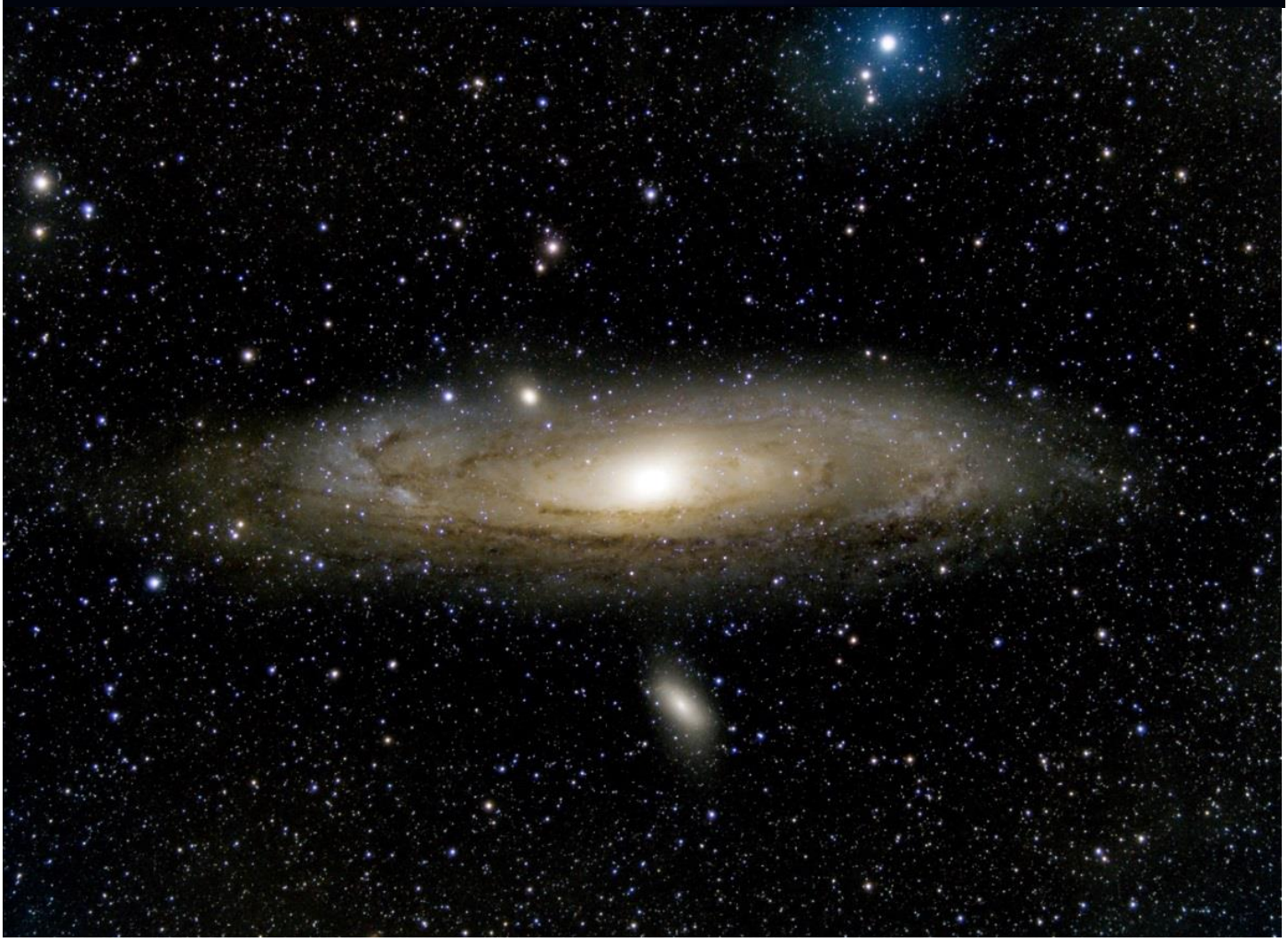
SKYNEWS



Andromeda Galaxy by Lucky Budd, imaged on August 10th and 13th, 2021

Opposing Views

Certainly Mars gets the most headlines, when it comes to the subject of planetary oppositions: its closest proximity to Earth in its orbit. Mars is also noticeably brighter in the night sky and the red colour is a showstopper. The outer planets in our solar system are also brighter and seen to be bigger, but the size of these planets and the vast distances away from Earth make these oppositions much less dramatic, without using a telescope. The opposition of Mars happens at intervals of about twenty-six months. The last one was in 2020, but the local weather was less than perfect for observing the event, something not unusual during October. The opposition before that it was the local weather on Mars that was the issue for observers, with a planetary dust storm obscuring views of our planetary neighbour.

Saturn and Moons by Lucky Budd, August 28th, 2021.

All four of the Outer Planets will be in opposition at some point during 2021, unless you still count poor neglected Pluto, who was in opposition during 2018. For observers and astrophotographers, planetary oppositions provide the opportunity to get the best views of the other planets in our solar system. For space exploration and travel, these oppositions provide opportunities to make the most efficient journeys between planets.

The Opposition of Saturn took place very early in the morning of August 2nd or very late in the evening of August 1st, depending on how you perceive the time of 01:20am. The slightly larger apparent size of Saturn makes it an ideal time to have a look for its moons. While Titan is quite easy to find through a small telescope or large pair of astronomy binoculars, the other moons are quite small in the night sky. One of the tricks I learned to locate these moons is to excessively over expose a photo taken through a telescope on a tracking mount and then compare the image to the same time using planetarium software, to sort faint stars from moons. You won't see any detail and the moons seen this way are only revealed by the tiny light bursts exposed by in the high ISO image. If nothing else, it's an interesting astrophotography exercise. The intervals between these oppositions are just over twelve months and the next Opposition of Saturn will be on August 14th of 2022.

The Opposition of Jupiter was at 4pm on August 19th, but the view was unfortunately marred by the particulate matter from wildfire smoke. It was unfortunate, but measured against the hardships from wildfires suffered by so many fellow British Columbians we have a lot to be thankful for here in Greater Victoria. Many people consider Jupiter to be an

attempted star that failed to gain enough mass to make our solar system a binary one. Jupiter has around thirteen times less mass than a brown dwarf and about one hundred times less mass than the smallest red dwarf stars that we've observed. As we continue to puzzle over additional discoveries of huge exoplanets, it's likely that mass alone is not the only deciding factor in the creation of a brown dwarf or red dwarf star. The Opposition of Jupiter happens roughly every thirteen months and the next occurrence will be on September 26th of 2022.

On September 14th we also had the Opposition of Neptune, but the event was unfortunately clouded out. The Opposition of Uranus is on November 4th, but autumn tends to be more *miss than hit*, for getting ideal observing conditions on a specific day. These events occur roughly every year, so if you missed any planetary oppositions this year, you should have an opportunity to see it next year if it's an outer planet. The frequency of planetary oppositions with Earth is a bit longer for Venus and Mars, and much shorter for Mercury. Planetary oppositions are great observing and imaging opportunities, and useful for bringing attention to the other worlds in our solar system.

Bruce Lane

Editorial Remarks

I'm always looking for new ways to add to our monthly newsletter/magazine, whether it's the *astronomy term of the month* or the latest chicken picture. An idea I've been working on is a new observing column, called *Star Hop*. The basis of this column is that one of the things I miss about going out observing with my fellow RASCals was having an experienced observer show me something I hadn't seen before, like an obscure NGC object or some interesting double stars. It happened not uncommonly in the *Before Times*, but with the realities of the Pandemic, it's not something that we can expect to experience for some time to come, given that we're not supposed to be sharing eyepieces with other people. When we're out observing, we're often drawn to a handful of familiar targets that we look at, whenever they're available in the night sky, often at the detriment of experiencing new celestial sights. It's a case of being creatures of habit and not always having or taking the time to properly plan our observing sessions.

With the *Star Hop* column, I'll be 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 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 *Star Hop*.

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 September

The thrill of discovery is deeply satisfying

Carolyn Shoemaker died last month. After her children had grown up and she was 51 years old, she started her astronomy career. She helped establish the Palomar Asteroid and Comet Survey, and for decades she studied the photographic plates coming off of the 18 inch Schmidt wide-field telescope, located in a dome next to the Palomar 200 inch telescope. At an average of 1 discovery for every 100 hours spent at the stereoscopic microscope, she became the world's top comet finder.

This was more than a job. Everybody who knew her emphasizes her enthusiasm and humour. Among these friends is an acquaintance of several of our centre members, David Levy. On March 23, 1993, David passed some photographs he had just taken of the region near Jupiter, and Carolyn exclaimed that she saw in these images a strange "*squashed*" comet. This comet became known as Shoemaker-Levy-9. It was actually the 11th comet they had discovered together, but two were aperiodic and so had a different naming convention. I remember the excitement, when 4 months later, 21 fragments of SL9 crashed into Jupiter with images from professionals and amateurs alike started pouring in. We got to watch a cosmic collision in real time!

What kept Carolyn Shoemaker at this slow, painstaking task was similar to what many amateur astronomers feel. She said "*The thrill of discovery is deeply satisfying*". Few of us will get the opportunity to do cutting edge science with the best instruments available, but all of us get our own personal thrills. Whether the discovery is at the eyepiece, or on the computer monitor, or from a revelation that comes during a talk at our Astro Cafe, the experience continues to be deeply satisfying. In memory of Carolyn Shoemaker, I wish you all many more of these deeply satisfying moments!

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 continued 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/astronomy-cafe/*

After taking the first Monday of the month off for British Columbia Day, the first Astro Cafe of the month took place on August 9th. Randy Enkin talked about Mars Retrograde, the Meteor Cluster from Hawaii, and the ISS Space Olympics. There was a discussion about the weekly virtual UVic Observatory Open House events on Wednesday nights; John McDonald shared some information about the upcoming Perseid Meteor Shower; Dave Payne and Brock Johnston showed some of their astrophotography; David Lee talked about the Ophiuchus Nova outburst; John McDonald shared some images from RASC Edmonton; and Laurie Roche gave an announcement about the upcoming Diane Bell Memorial and FDAO Summer Saturday event.

For the next Astro Cafe, things started with Michel Michaud giving an update on the construction of his home observatory in *la belle province*. Dennis Crabtree (DAO Director) was the feature speaker and talked about the history of the Plaskett Telescope, focusing on the choice of its location. Chris Purse announced the *very* tentative possibility of having an in-person Astro Cafe for the September 13th meeting, depending on the state of things at that time; and David Lee mentioned an astrophotography panel coming up on August 21st. Sid Sidhu showed some All Sky camera images of the Perseid Meteor Shower from August 12th; Randy shared a series of online images taken of the Perseid Meteor Shower and Jupiter; Dave Robinson shared some images from RASC Edmonton; John McDonald processed and presented some astrophotography data of the Cave Nebula done by Dave Payne; Laurie thanked people for organizing Diane Bell's Memorial; David Lee talked about upcoming discussion about climate change and its effect on Astronomy; and Dave Payne closed out the evening by showing his image process on a mosaic of the Andromeda Galaxy.

For the third Astro Cafe of the month, things started off with some speculation about a not so secret society within RASC, after David Lee hinted at the *Society of Daves*, who meet at General Assemblies to swear in new members. John McDonald introduced a series of images from Victoria Centre members created by: Brock Johnston, Dave Payne, Dan Posey, Garry Sedun, and himself. Ken Atkinson finished off the evening with the presentation about a *Scientific Narrative* article from Nature magazine.

Apollo 16 Training: John Young and Charlie Duke on the 1-g LRV during training at Taos, New Mexico. September 9th or 10th, 1971. Scan by JL Pickering, courtesy of NASA

The last Astro Cafe of the month began with some bad news, with the announcement of Frank Younger's death and upcoming online service (retired astronomer at the Dominion Astrophysics Observatory). David discussed the upcoming RASC Exploring Exoplanets course (Aug 4-Sep 1) and talked about editing NASA Raw Data (Mars Perseverance and Junocam); Arnold Rivera (RASC Edmonton) and Joe Carr's solar images from the weekend were presented; John McDonald shared his time lapse video of a Hibiscus blooming; Bill Weir talked about his latest project *Observing as Galileo*; Brian Barber shared some images he took with a smartphone, inspired by the *Explore the Moon* program; and Chris Purse led a discussion about the challenges of having in-person Astronomy Cafe in the future, with the covid-19 cases currently on the rise.

Bruce Lane

Special Interest Groups

Getting Started in Astronomy

The beginner's group has been exploring features in the night sky constellation by constellation. So far we have looked at objects in the constellations of Lyra and Capricorn. As the last of the good weather will be slowly disappearing, moving in to the fall we encourage everyone to get out and observe; especially now the dark hours are increasing. In addition we will be sharing our experiences together as a group. For more information on this group, please contact David Lee at *david@victoria.rasc.ca*

Astrophotography

The astrophotography SIG recently has had a presentation on PixInsight, as this continues to be a common tool in this SIG's toolkit. Each month, this community has a challenge object which we review at the next session. We have looked at the planet Venus and the Andromeda Galaxy is currently the object of interest for the challenge. For more information about this group, please contact John McDonald at *john@victoria.rasc.ca.*

Electronically Assisted Astronomy

One of the important components of EAA is the ease of setup and putting many of the computer tasks near the mount has become a common trend. Recently we have been exploring alternatives to the popular ASIAir Pro, based on the Raspberry Pi, but with software that is open source or relatively inexpensive. We are looking at Astroberry which also offers support for more manufacturers' hardware. For more information on this group, please contact David Lee at *david@victoria.rasc.ca*

Astronomy Related Makers

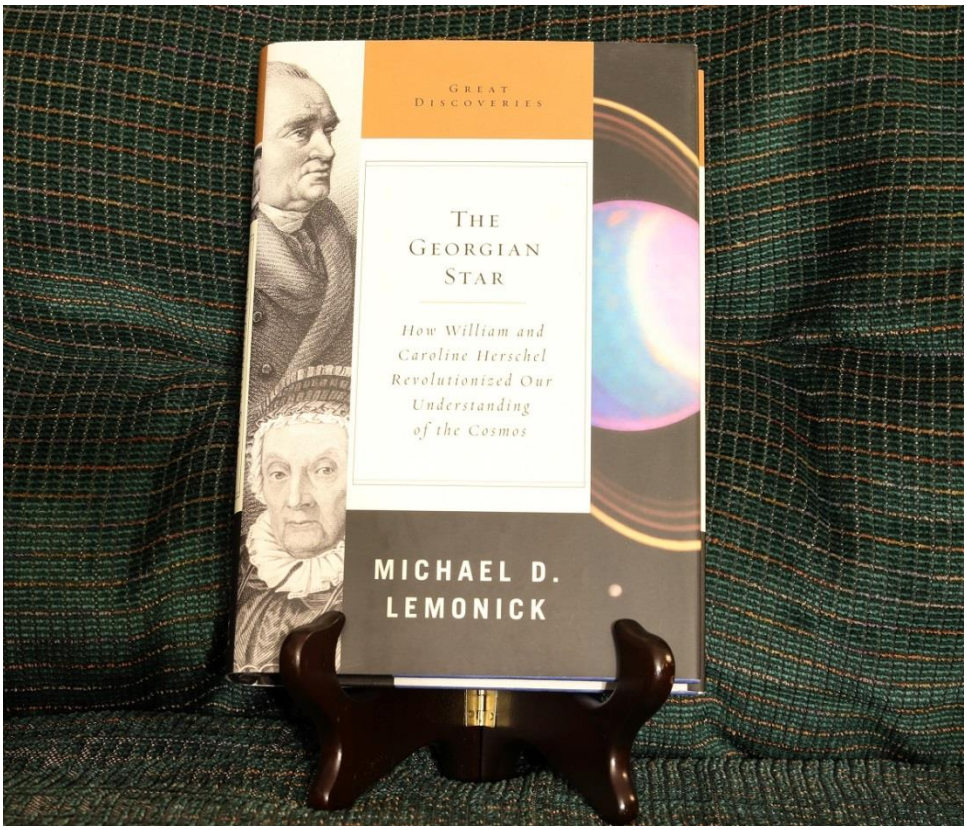
The Makers SIG is also looking at Astroberry as a way of adding functionality to our portable telescope mounts at the Victoria Centre Observatory. We continue to explore different projects we are working on, like portable trackers and accurate time servers that can be used for occultation work. For more information about this group, please contact Jim Cliffe at *jim@victora.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 the books from our collection. For more information and to make a book delivery request, please contact Alex Schmidt at: *librarian@victoria.rasc.ca*

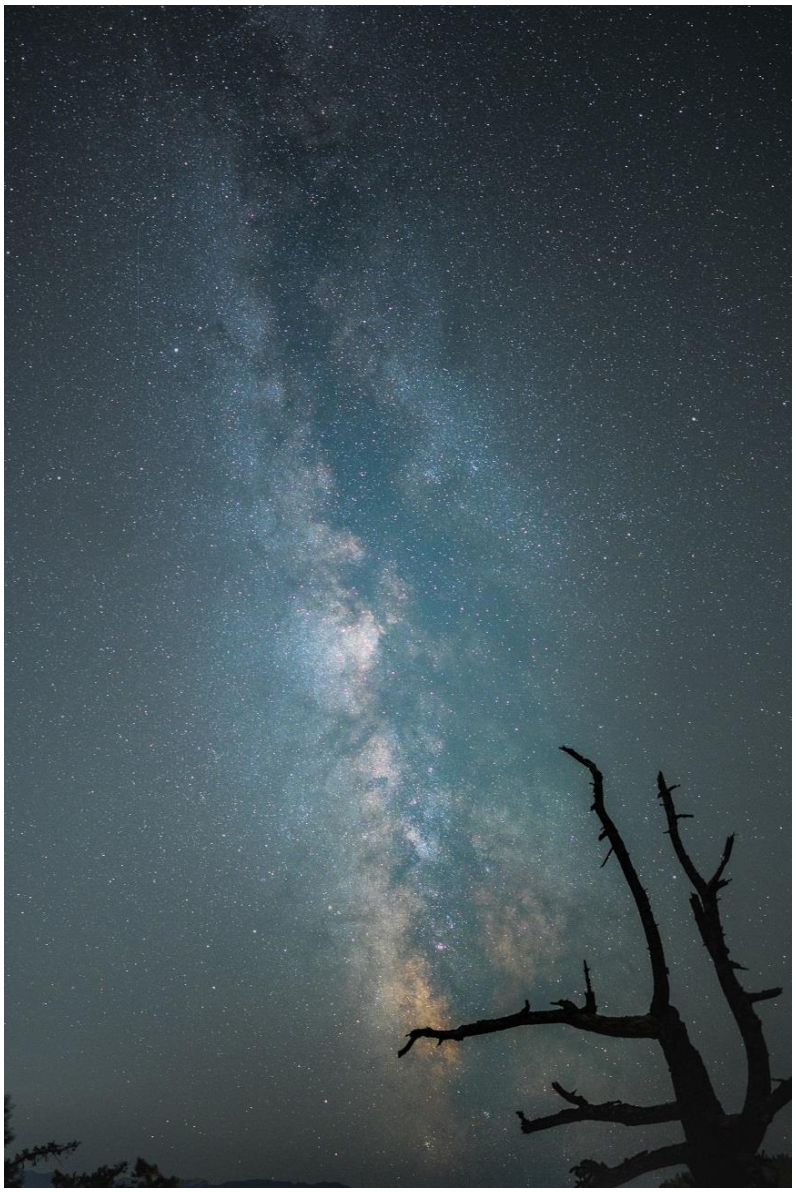
Our library covers many aspects of astronomy: observing, astrophotography, telescope construction, space exploration, astrophysics, and much more. Normally, the library is opened up during the social gatherings in the faculty lounge that happened after our monthly meetings, with coffee, juice, and cookies 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 taking a closer look at *The Georgian Star*, by Michael D. Lemonick. This book covers the astronomical exploits and lives of the Hershel family. William Hershel, born *Wilhelm* in Hanover, is well known to most people in the astronomy community. His sister, Caroline, he rescued from a life of drudgery in Hanover, is now receiving a lot more attention. After she arrived in England, William personally undertook her science and music education. She went on to become his astronomy assistant and later went on to make discoveries of her own. Alexander Hershel is a less well known sibling, who took an active role in the building of the Hershel telescopes that made William's observations possible, as well as being sold to astronomers and nobility alike to supplement the family income. Besides being one of the most dedicated observers of his time, he was also using some of the best instruments of his time, including what were very likely the best telescope eyepieces on the planet. The Herschel family were building reflector telescopes in England, using ever larger speculum mirrors, in the time just before the Era of Great Refractors. Sadly, William Hershel died a few decades before the invention of the process of using silver coatings for telescope mirrors.

William Hershel had a life of good fortune that rewarded his drive and intellect. When he ended up in Bath and wanted to get into serious telescope making, a local amateur astronomer just happened to be selling all his mirrors and tools. After making a name for himself as an expert observer, a prominent member of the Royal Society (Joseph Banks, who later became the society president) and the Astronomer Royal both mentored his transition from enthusiastic amateur to publishing papers for academic consumption. This was Neville Maskelyne, the same Astronomer Royal who dismissed an assistant over a 0.08 second difference in timings due to the variations of the *personal equation*. Gaining the notice of people like this got him invitations to publish more of his findings to the Royal Society, which in turn raised his profile to be an astronomer exchanging letters with the top astronomers of his time. After the discovery of the first new planet in our solar system, since people first began looking up at the heavens, his friends in the astronomical community lobbied for him to get a royal stipend, so he didn't have to split his time between music teaching and astronomy. Later, after Caroline discovered a comet, William lobbied for her to get a modest royal stipend too. Inspired by the Messier List, William Herschel created a much more expansive catalogue of nebulae, with a lot of help from his sister, who both recorded observations he shouted to her from high atop his telescope, as well as discovering a few nebulae on her own.

The biggest adversity Herschel suffered was in getting to name things. He initially named the seventh planet *Georgium Sidus*, in honour of the English king and fellow Hanoverian. Not surprisingly, the rest of Europe wasn't keen to accept a nationalist name and eventually the unfortunate name of *Uranus* was put forward by the first German to observe what was at the time, a comet with unusual characteristics that some speculated was a planet. William Herschel never accepted the new name that is today used for the planet he discovered. He proposed the term *asteroid*, which was soundly rejected until well after his death. This was largely due to the self-appointed *Celestial Police*, a group of loosely associated astronomers acting as astronomical authorities, whose number included people like Giuseppe Piazza, who had discovered prominent asteroids, and likely didn't enjoy the idea of their discoveries being diminished from their planetary status. They were also likely a bit on their guard about that Herschel character, following his attempt to name a new planet after his king. The term *asteroid* wasn't invented by William Herschel, but was the result of a request to Joseph Banks, who was head of the Royal Society at the time. Banks many requests to figure out names for new things like this and he subcontracted the work out to philologist Stephen Weston, the one who actually came up with the term. *Colourific Rays*, what is now referred to as infrared radiation, never quite caught on either. The term *planetary nebulae* did catch on, although the term continues to cause some confusion among the astronomy community.



Milky Way by Dan Posey, August 4th, 2021

While numerous members of the Herschel family went on to become members of the royal orchestra, William Hershel's son was to succeed him as an accomplished observer in his own right. John Herschel would amalgamate his own nebular discoveries, with that of his father and aunt, to publish the *General Catalogue of Nebulae and Clusters of Stars*. A few decades later, astronomy historian JLE Dyer would publish a revised edition of this work: *A New General Catalogue of Nebulae and Clusters of Stars*. The *NGC* number designations for deep space objects, from this work, are still in use today. As science biographies, *The Georgian Star* is a bit of a page turner, chock-full of interesting anecdotes and facts that make it well worth the read. It's available by order from your local bookstore.

Bruce Lane

Eagle Nebula (M16) by Dan Posey, Aug 14th, 2021

Hill and Dale (Observing on the Island)

August is a month for local observers and astrophotographers to take advantage of longer nights and pleasant summer weather, in between the shorter nights of previous months and the worsening weather of the months that follow. There's always some apprehension about being smothered by wildfire smoke, with so much of the BC Interior and Western United States on fire this time of year. There were some small wildfires to the north of the Malahat, but other than some smoke for a few days, the Greater Victoria area remained an oasis during the devastating events in the BC Interior.

Bill Weir spent a few nights at the Pearson College Observatory, where he was joined on one occasion by Matt Watson and Dan Posey. There are some exceptional telescopes at this observatory and an offer has been made by Pearson College to train an experienced telescope operator or two on their 25" aperture telescope. Bill is also undertaking a project to challenge himself as an observer, by using a 27mm Galileo style refractor telescope, while observing from Metchosin. Bill Weir even managed to capture some sunspots on a particularly active day for solar observing (*seen right*). Lucky Budd spent some time doing astrophotography from Rathtrevor Beach Provincial Park, south of Parksville, where he imaged several targets, including the Andromeda Galaxy (*seen on the cover*). Dave Robinson was among a growing number of local amateur astronomers who have been making use of the urban star park at Cattle Point during the Pandemic. David Lee has been doing most of his imaging and observing these days from the end of his driveway, while Garry Sedun spent some time under the dark skies on Quadra Island in the middle of the month.

The Technical Committee have been using the current downtime at the Victoria Centre Observatory to upgrade our optics and equipment over the last year. That process is continuing with the upcoming purchase of some new imaging equipment, to help give our members the tools to continue to create high quality astrophotography seen on the RASC Zenfolio site and of course on the pages of *SkyNews*. 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 likely going to be 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 bit 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) *membership@rasc.victoria.ca* and we'll see you up there on the Hill some night soon.

Bruce Lane

Astronomical Term of the Month: Planetary Nebula

Despite their name, given to them by William Herschel, these nebula have nothing at all to do with planets. They're the result of outgassing from a dying star that forms a luminous shell. Their rounder observable shape could have resembled a planet; especially through the optics of an 18th century telescope. There are estimated to be as many as 20 000 planetary nebulae in our galaxy, but we've only managed to catalogue about 1800 of them.

The biggest barrier to finding more is seeing past all the dust in our own galaxy. Infrared capable telescopes would certainly help to find more, but there aren't any IR space telescopes left in operation and only two IR observatories (NASA IRTF and VISTA) still in operation to the best of my knowledge. There's also the Stratospheric Observatory for Infrared Astronomy, mounted aboard a Boeing 747, which is still in operation despite being threatened with cancellation more times than a salty entertainment celebrity by the Twitter mob. The James Webb Space Telescope, when it's finally launched, will have the benefit of operating in the IR spectrum, which should give it the opportunity to see even more of our gassy galaxy. Some of the more familiar examples of planetary nebula are the Ring Nebula (M57) in Lyra, the Dumbbell Nebula (M27)in Vulpacula, and the Blue Snowball Nebula (NGC 7662) in the Andromeda Constellation.

Bruce Lane

In Memorium

Ed Maxfield (1946-2021)

Ed Maxfield passed away only a few weeks ago, on September 12th. He was a long-time member of both RASC Victoria and the Cowichan Valley Starfinders. Ed took an active role in the star parties at the Fish and Game Club, was a *Member at Large* on the RASC Victoria Council, frequently volunteered at the DAO Saturday nights, and was once a regular at Astro Cafe (*where this picture of him was taken*).

Frank Younger (1940-2021)

Frank Younger was recently lost to us due to an accident at his home. He was an astronomer at the Dominion Astrophysics Observatory, who shared a lot of his time with the amateur astronomy community. Frank gave numerous lectures to the members of RASC Victoria, including the one he's pictured in (*seen left*) from the 2008 Victoria RASCals Star Party; where the subject was on how to get the most out of your telescope.

While at the Mount Kobau Observatory, working with Ernie Pfannenschmidt to photograph the flight-path of the Apollo 13 mission with the 16" aperture Cassegrain telescope, they managed to take an image of the gas cloud from the space craft explosion on April 13th, 1970. The Mount Kobau Observatory has since closed down and that 16" telescope is now found at the Centre of the Universe on Observatory Hill, where it's used for public outreach.

In Closing

We just went another summer without star parties and all we can hope for is next summer. The autumn sky is returning and with it some of our favourite constellations that for many amateur astronomers have become lifelong friends. You'll also need to start becoming a bit more familiar with your warmer clothes when you're out under the night sky. As always you should be dressed as if it's going to be a lot colder than it is because you're not going to be moving around a lot. Also make sure to have an outer shell layer to act as a windbreaker to keep those *gentle* Metchosin Mistrals from chilling you to the bone.

Over a year ago, people were at their windows and balconies during the first lock down, banging their pots and pans in appreciation for the gruelling work being done by hospital staff and emergency services workers in the face of a global pandemic. Now we find ourselves witnessing the worst of us terrorizing the same hospital staff across the country. These individuals are being organized on social media, where they're fed a steady diet of hate, lies, and conspiracy theories by some very bad people. Unlike the madness we've seen south of the border, these so-called *protesters* are fellow Canadians and for that we should all feel some measure of shame. They're co-workers, neighbours, acquaintances, and sometimes even family. Bad actors, both here and from abroad, have sought out those of us who are easily influenced. The time for saying this isn't the sort of thing that happens in Canada is long past, because it's exactly what's happening in Canada.

While we brace against the worst of the fourth wave of this pandemic, thanks to a lot of dedicated people, we still have a lot virtual options for learning and gathering online. In RASC Victoria, we have Monday Astro Cafe, astrophotography hosted on Zenfolio, and our Special Interest Groups. RASC National has their RASCanada channel on YouTube. The Friends of the Dominion Astrophysics Observatory are still doing Summer Saturdays, with a little help from their fellow Victoria astronomy groups, although they'll soon be holding these events less frequently with the worsening weather. The Department of Astronomy at the University of Victoria are continuing to fulfill their mandate of public outreach, with virtual sessions every Wednesday evening. Further up island, the Nanaimo Astronomy Society continues to hold monthly meetings online. If online engagement isn't to your taste, there's always an entire universe waiting for you outside, to explore with your eyes and optics.

Bruce Lane: SkyNews Editor

Photography Credits

Cover: Andromeda Galaxy, by Lucky Budd, data taken Aug 10 and 13, 2021. This image was taken using a Sharpstar 61 and Star Adventurer Pro mount, with an asi294mc pro camera. This image used 2 hours of unguided 45 second exposures on 1 night and then another 1.5 hours of 30 second shots on night 2. No filters were used.

Page 2: Saturn and Moons by Lucky Budd, Aug 28, 2021. Composite image of Saturn with Iapetus, Dione, Enceladus, Thetys, and Mimas (on the right)

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

Page 4: Randy Enkin (RASC Victoria President) with Sextant, Feb 20, 2021, by Eva Bild.

Page 4: Carolyn Shoemaker, time and photographer unknown, credited to US Geological Survey

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

Page 5: Apollo 16 Training, John Young and Charlie Duke train at Taos, New Mexico. Journal Contributor Markus Mehring calls attention to the silver-colored, chest-mounted Hasselblads, identical to the flight cameras and which were used by the astronauts to practice taking pictures, so that they could hone their ability to accurately set the focal distance and f-stop, and to properly aim the camera. Pictures taken during these field exercises were developed and then studied by the crew to improve their technique. September 9 or 10, 1971. Research byJL Pickering, courtesy of NASA.

Page 6: Apollo 16 Training, John and Charlie on the 1-g LRV; during training at Taos, New Mexico. September 9 or10, 1971. Scan by JL Pickering, courtesy of NASA.

Page 7: Apollo 16 Training, John Young takes a picture toward the south, at the Rio Grande Gorge. September 9 or 10, 1971. Scan by JL Pickering, courtesy of NASA.

Page 8: Posed Book, “The Georgian Star”, taken in Editor’s home on July 15, 2020, by Bruce Lane

Page 9: Milky Way, from Pearson College, Aug 4, 2021, by Dan Posey. Single 15 second exposure, done with an A7III at ISO 1600, using a 24mm lens at f1.4 and a red-intensifier filter.

Page 10: Eagle Nebula (M16), Aug 14, 2021, by Dan Posey. 24X8 minute exposures using an OIII filter (8.5nm), 21x8 minutes Ha filter (7nm), and 24x8 minutes SII filter (8nm), using a SBIG 8300 at -10*C through an Askar FRA600 at f3.85. This image was calibrated with bias, darks, and flats, before being stacked/processed in PixInsight.

Page 11: Sunspot 2860, Aug 28, 2021, by Bill Weir. This pictures was taken using an iPad to do afocal imaging through the eyepiece of a 150mm aperture Dobsonian reflector telescope, with minimal post production (cropped, rotated, and brightness adjustment).

Page 12: Apollo 16 Training, portrait of astronaut Charlie Duke, in suit and helmet. September 17, 1971. Scan by Frederic Artner, courtesy of NASA.

Page 13: Ed Maxfield at Astro Cafe, August 2007, unaccredited photo.

Page 13: Frank Younger, guest speaker at 8th annual RASC Victoria Star Party at the Victoria Fish and Game Club, August 2008, unaccredited photo.

Page 14: “Hawk”, Ameraucana chicken, Aug 27, 2021, by Bruce Lane.

Page 16: Apollo 16 Training, John Young (left), Ken Mattingly, and Charlie Duke pose for an informal picture with a lunar globe. John is not pointing at the lunar landing site. Scan by JL Pickering/Kipp Teague, courtesy of NASA.

Call for Article and Photo Submissions for the October Issue

SkyNews is looking for submissions of astronomy photos and articles for the October issue of our Victoria Centre’s magazine, including submissions for our new *Star Hop* column for observers. Send your submissions to editor@victoria.rasc.ca

RASC Victoria Centre Council 2021

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NRC Liaison	James di Francesco	
FDAO Liaison	Laurie Roche	
Members at Large	Jim Hesser	David Lee
	Chris Gainor	John McDonald