



41 YEARS!
1981-2022

RASC
SUDBURY
CENTRE

Up Above, The Heavens Await



RASC SUDBURY CENTRE ASTRO-NORTH | Friday Nov 4th, 2022

www.sudburyastronomyclub.com

Facebook: www.facebook.com/groups/RASCsudbury/



Meeting Agenda, 7:00PM

1. Sudbury RASC President Address – Alan Ward
2. Bart Fried - Who Put the Hole in That Telescope?
3. Break - (10min)
4. Show & Tell (10min)
5. Closing Comments/News/Open Forum/Starlight Lounge

**Hybrid Meeting!! . We hope that
you'll be able to join us in person
at the Science North Planetarium!**

Meeting Link: Please use this link if attending via Zoom. The link will be different every month!

<https://us02web.zoom.us/j/88289679460>

**Note about Parking at Science North if attending in person:
Stop at the booth, Press the Button, Take the Ticket. The gate lifts. Proceed,
and you will not be charged to get out. The ticket makes a handy bookmark!**

This Month's Presentation:

Bart Fried of the Antique Telescope Society



Who Put that Hole in The Telescope?

Founder and past President, Antique Telescope Society, and moderator of the ATS Forum. He is the recipient of the ATS Isaac Newton Medal for meritorious service to the Society. As a recognized authority on the history of the telescope, he has lectured for several decades around the U.S., the

U.K., Ireland and Canada. His field of concentrated research is the life and work of Dr. John Alfred Brashear. Over 30 published articles can be found in Sky & Telescope magazine; the Journal of the Antique Telescope Society; Eyepiece newsletter of the Amateur Astronomers Association and other journals and publications. Bart is also the Executive Vice-President of Amateur Astronomers Association, Inc, the largest individual astronomical association in the U.S. with ~600 members.

Join us as he tells us a tale about a mystery involving precision timekeeping, a large center hole in a Brashear lens, and Variations in Latitude.

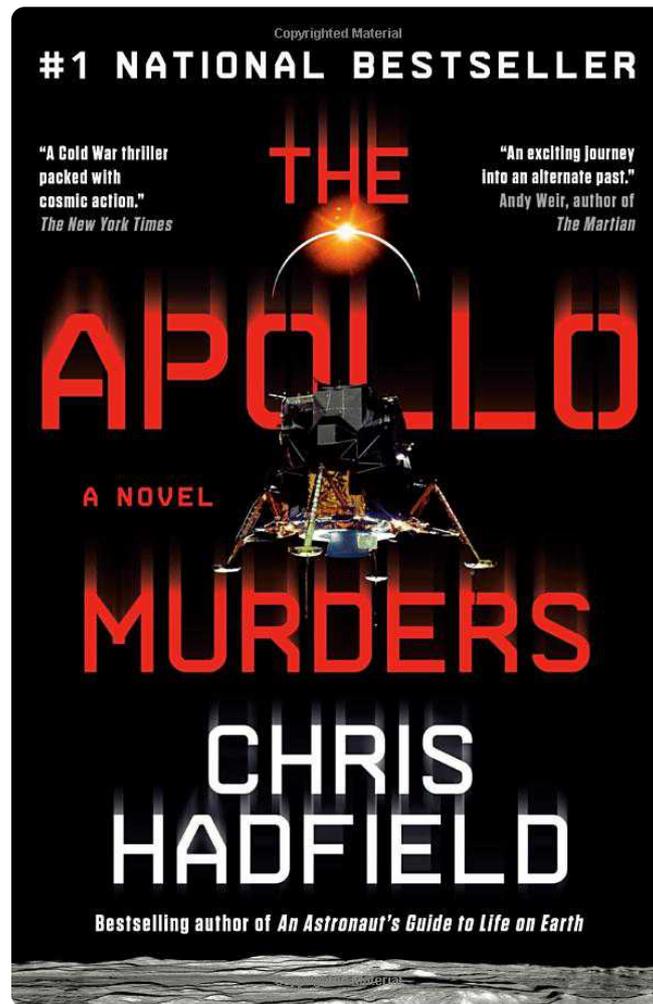
- == Join us! == -

Friday Nov 4th @ 7PM

A Hybrid Meeting on Zoom and at the Science North Planetarium

Next Month: Michael Wright, RASC Kitchener-Waterloo
Astronomical Sketching - Techniques and Tips for
Deep Space Objects

**SPECIAL
DRAW!!!**



**SPECIAL
DRAW!!!**

1973. A final, top-secret mission to the Moon. Three astronauts in a tiny module, a quarter of a million miles from home. A quarter of a million miles from help.

As Russian and American crews sprint for a secret bounty hidden away on the lunar surface, old rivalries blossom and the political stakes are stretched to the breaking point back on Earth. Houston flight controller Kazimieras "Kaz" Zemeckis must do all he can to keep the NASA crew together, while staying one step ahead of his Soviet rivals. But not everyone on board Apollo 18 is quite who they appear to be.

Full of the fascinating technical detail that fans of *The Martian* loved, and reminiscent of the thrilling claustrophobia, twists and tension of *The Hunt for Red October*, *The Apollo Murders* puts you right there in the moment. Experience the fierce G-forces of launch, the frozen loneliness of Space and the fear of holding on to the outside of a spacecraft orbiting the Earth at 17,000 miles per hour, as told by a former Commander of the International Space Station who has done all of those things in real life.

Strap in and count down for the ride of a lifetime.

**YOU COULD WIN THIS BOOK BY
ATTENDING IN PERSON!**

Editor's Voice

We have quite an exciting meeting coming up! An international speaker and a book draw, among other things! We hope you'll join us this month, whether it's in-person or online.

Please Note: Any submissions should be sent no later than two weeks before the meeting date.

- **Patrick Dodson**

Centre News

This space reserved for news directly impacting the Sudbury Centre, whether it be membership renewal notices.

Book Draw

This month we are featuring a book draw. The book was originally purchased while we were all in the middle of a pandemic, and eagerly anticipating the return to in-person meetings. This editor had completely forgotten about it and suddenly remembered after our October meeting! So, thus we have a special draw this month. The novel by Canadian Astronaut Chris Hadfield is an excellent read for sci-fi and astronomy fans! Tickets will be free to anyone attending the meeting in person.

Thanks!

We owe a big thank you to Olathe MacInctyre and Lucy at Science North for making these in-person meetings possible! Also a big thanks to Science North for allowing us to have them in the Planetarium. As you all know, the situation with Laurentian has made us unsure of when it will be possible to return at the Doran Planetarium. So, the whole club would like to thank you!

Community Contributions

The Helix Nebula

by Norm Hey

Hi folks. I have had a busy summer, without a lot of time to use my scopes or cameras, but a fair bit of naked eye and bino viewing. I saw some amazing aurorae when I was up around the Ungava Bay area in late August, three clear nights in a row. Unfortunately I didn't have an appropriate camera to capture any images—you always forget something when you pack for a big trip and I forgot the wide angle lens until I was already two hours away from home!

When I did get back, we had some great clear skies before heading out on yet another road trip (retirement is tough....)

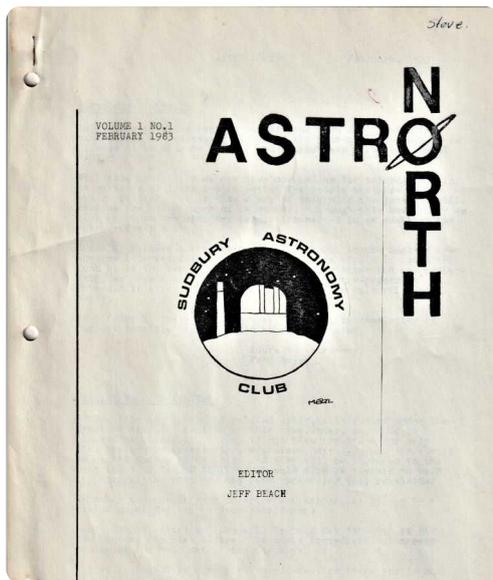
Unfortunately, these clear skies were at the same time as the full moon of September. Well, it meant that night time saunas and jumping in the lake was great, but the Moon is a sort of natural light pollution, from an imaging perspective. Planetary imaging is OK, but deep sky stuff can get pretty tough.



That's where narrowband imaging shines. Narrow bandpass filters allow only limited amounts of light through, depending on how they are made. They are specific to certain wavelengths, typically the wavelengths of light emitted by ionized hydrogen, in its H-alpha form, triply ionized oxygen commonly known as Oiii and doubly ionized sulphur, Sii. Typically filters allow only these wavelengths plus or minus a few nanometers, and most light pollution as we know it isn't in these wavelengths. So full moon? No problem! Well, not a huge problem, because it's still there, just very markedly attenuated. Worse in Oiii, but still monochrome imaging with narrowband filters can be done fairly efficiently even with the full Moon fairly close to a target.

This image of the Helix is just the second true narrowband image I have made using my monochrome camera and Ha and Oiii filters. The filters have a 6 nm bandpass—not the most restrictive available, but also not costing me my left kidney and part of my liver! Shot from my back deck, the Helix never gets very high for us here in Sudbury, and I have trees that block it just after it passes the meridian, so my imaging window is pretty tight. This image is composed of 17 shots in Ha and 11 in Oiii, each one 5 minutes. I have used what is known as the HOO palette, where an image that is usually known as RGB or red-green-blue has the R channel from the Ha signal, the green channel is a mix, mostly the Oiii and the blue channel is from the Oiii signal. Clearly this target will benefit from more exposure to bring out more of the faint outer structure of this visually elusive object. It's one of my favorite late summer—fall targets at a dark sky site. I have found low magnification seems to work best for my eyes and of course the more aperture you can bring to bear the better.

In honour of the club's 40th Anniversary, we are reprinting articles from the Sudbury Astronomy Club's very first newsletter, AstroNorth. All circa 1983.



Reflections on Stellafane (Part 3 of the ongoing series) - by Fred Boyer - AstroNorth December 1983.

Saturday Morning at Stellafane began the same as Friday evening had ended, warm, humid and cloud covered. No gentle zephyr had arisen during the night to drive off the moisture and bring in a sky clearing high pressure zone. In spite of this everyone seemed to be in a good mood. After a wake-up cup of coffee and breakfast, we sat around for a few minutes discussing what was going to be happening during the day. Steve then headed up the hill to the Phoenix, Natalie took off with her young friends, while Greg, Gerry, and I sat down with a second cup of coffee to watch the rest of the campsite wake up.

By mid-morning the sun had burned off enough cloud cover, that a few people were attempting to look for sunspots with their telescopes.

Close by our campsite, a burly, blond haired young man began setting up a beautiful 6" brass refractor. Immediately, we began to walk over to have a look at that gorgeous telescope. Talking to the owner we found out that he was John Briggs, an editorial assistant for Sky & Telescope magazine and that his instrument was a Clark refractor. John told us that he had restored the wooden, alt-azimuth tripod mount of that telescope himself and only had to repolish the tube to bring it back to almost original condition.

I queried Greg about the significance of a Clark because I'd never heard of one before. He told me that Alvan Clark was a famous telescope maker around the turn of the century. Also, that Clark had ground and polished the 40" Yerkes refractor objective lens. By the way, stamped on the tube of John's telescope was the date 1897.

Close to John Briggs' two person tent was a small Boler-type house trailer, called Piñata (pronounced peenyata), belonging to Walter Scott "Scotty" Houston. Greg tried to ask him for his autograph but ended up sitting under a canopy talking to him. Seeing this, Gerry and I wandered over to meet one of the most famous amateur astronomers in

North America. Scotty told us tales of observing trips to Texas, Mexico and Arizona. When asked to write a note to our club, he readily acceded.

I remember feeling like a small boy, listening to a story teller around a campfire. For a moment my whole world seemed to be trapped with the sound of Scotty's voice when my reverie was broken into reality. Mr. Huston's wife reminded him, when he was holding "court", he was needed elsewhere. He then excused himself saying he would love to see the Sudbury impact site from the air and see our astronomical facilities. He also cautioned that as he was getting up in years, he couldn't promise anything definite.

It was now getting close to noon and the sky was clearing rapidly.

We trudged up the hill to see Steve and tell him whom we'd been speaking to. After relating our "adventures" to him, Steve told us to go and have a look at the sun through Al Nagler's homemade 8" folded refractor.

I lined up behind a dozen other people to look at a yellow filtered sun. The sunspots were almost brown in colour because of the filter Nagler was using. Later in the day we looked at a white filtered sun through a Celestron 14". Although all of us agreed, we preferred the contrast and colour of the filter used by Al Nagler, to tell the truth I wouldn't have minded owning either telescope.

While looking through the C14, an older gentleman asked us if one of us worked at INCO. I told him that I did and asked how he knew. He told us he also works for an INCO subsidiary in Pennsylvania and figured, after reading our camping nametags, if all three of us were from Sudbury, one of us had to work for the nickel giant.

The sun was now well past the meridian, it was oppressively hot and humid, and our thirst was beginning to assert itself. These factors combined, convinced us to indulge in the Mackenzie brothers' favorite pastime.

We had just snapped up our caps when Greg jumped up and introduced himself to a young man by the name of Mike Simmons. Mike has the distinction of being at Stellafane 20 years in a row and he's only 32 years old. He has also designed a new type of astro camera based on the Maksutov. Mike's design incorporates the basic elements of the Maksutov but brings the film plane outside of the camera tube instead of inside. A Simak (Simmons Maksutov) astro camera seems to be Greg's next big project because after talking to Mike for over an hour that

day, he has been looking for components ever since.

The conversation was well over my head so I decided to head back to the competition field and give Steve a well deserved break. By the time I got there, judging had already began. I listened intently as Steve explained how his sidereal clock drive worked to one of the judges. When he finished, I assured him that I could explain his drive reasonably well but not wander too far away in case I got into trouble.

Standing by the scope, I nervously watched one of the judges approach. Letting him examine the drive first, I cleared my throat, took a deep breath and was about to try and explain the drive when Dennis DiCicco came over and began describing it. Wildly looking around, I spotted Steve and frantically waved him over to the Phoenix. When Steve reached the scope he immediately realized what was happening and let Dennis continue his description, adding a few comments of his own here and there. When they had left, Steve told me, with a little pride, that Dennis had done an excellent description after hearing his talk on the drive for the first time the night before.

The afternoon wore on with clear, sunny skies. As the sun sank into the west, expectations for a good observing night rose.

When judging had ended I again attempted to give Steve a break because he had been standing out in that hot sun for most of the day. His voice was starting to give out after explaining the drive for the umpteenth time so I told him to go and wet his whistle and to relax for awhile.

During the time Steve was gone hardly anyone asked for an explanation. The lull in the activities gave me a chance to have a good look around the competition field. Just to the right of where I was sitting was Richard Berry (editor of Astronomy and Telescope Making magazines), with his 6" wooden refractor on a modified Dobsonian mount. To the right of the Porter Turret telescope was a 12" Cassegrain, designed by Russell Porter, used to test the seeing at potential sites for the 200" telescope.

There was history as well as celebrities here at Stellafane.

Almost directly in front of the Phoenix was a beautiful, brass model of the sun, earth, and moon, called a tellurium-lunarium. Steve introduced me to the man who spent close to 2000 hours building it. Réal Manseau, from Drummondville Quebec, has won several first prizes

at Stellafane for his historical reproductions of models that show the relative motion of the sun and planets.

So many things happened on that Saturday, it's impossible for me to remember all the fascinating people I seen or met.

At sundown everyone gathered on the grassy slop in front of the clubhouse for the twilight talks. Steve was kind of anxious for the talks to start because they were going to announce the winners of the competitions. Natalie came over to where the rest of us were sitting, informing us that her father had won a first prize ribbon. The grin on Steve's face was from ear to ear and didn't fade until he went to sleep early the next morning. The rest of us were sharing in his pride because we had helped bring the Phoenix II to Stellafane.

The talks began with the presentation of the competition winners and the winners of a raffle draw for some small telescopes. The purpose of the raffle was to help defray the cost of clearing land south of the clubhouse for a new campground. Apparently the Springfield Telescope Makers are in danger of losing the existing grounds to a Christmas tree farming operation. That would be a real shame after having the convention in the same spot for the last 50 years.

After a few donations to the clearing fund, Scotty Huston gave his humorous, but impassioned, speech on the history and tradition of Stellafane and the Springfield Telescope Makers. His talk made you realize, or at least start to realize, what that small chunk of land at the top of Breezy Hill means to amateur astronomy.

With the sun now well below the horizon, Greg and I headed back towards the camp to pick up our 9mm Nagler eyepiece. Gerry had taken off long ago to look through some telescopes and Steve was setting up the Phoenix for a long night.

By the time Greg and I got back in the line-up to Al Nagler's telescope it was around a half hour later. Al spotted us and asked the people in line to be patient for a few minutes while he checked out our lens. No one argued but one fellow pushed me out of the way before I could even have a look through my own eyepiece.

The lens worked quite well on Al's telescope and even better on a trailer mounted 16" f/ 4.2. As a matter of fact, every telescope we went to was willing to try our eyepiece.

Later in the evening we met up with Gerry again. He told us he was amazed at the trust everyone had. One fellow with a 6" refractor told Gerry to use the scope as long as he wanted. The owner was going to bed

for the night and just wanted Gerry to put the caps on before he left.

Around 3 a.m Sunday morning the clouds began rolling in again but everyone was satisfied with the night's observing. Tired, but pleased, the campsite settled down for a last sleep before the great trek home.

I know the title of this article is "Reflections of Stellafane" but before I reflect, I would like to relate to you one more thing that Scotty Huston mentioned in his twilight talk.

Fred Lossing of the Ottawa R.A.S.C Centre has been a regular visitor of Stellafane for several years previous to this one. Unfortunately, the year before, Mr Lossing had suffered a heart attack and would not make it this year. His reason, Scotty said, for not attending, was the greatest compliment ever paid to Stellafane. The following is the quote of Fred Lossing as told by Scotty Huston as close as I can remember, "The travelling I could take, the walking up and down Breezy Hill I could take, but I don't think I could take the incredible blazing excitement of Stellafane."

This "excitement", which was very evident in Steve and Greg, did not hit Gerry or myself for a couple of weeks after we arrived home. So much happened in such a short space of 48 hours, it took that long to fully digest what we had seen and learned.

Stellafane is not a party, even though a party atmosphere exists. It is truly a convention of amateur astronomers dedicated to advancing the amateur aspects of this oldest of the physical sciences. The accessibility of people like Scotty Huston, Richard Berry, or Al Nagler, to me, was amazing. Any question asked was answered or you were pointed to a person who could answer. Any introduction was pleasantly acknowledged . The people of Stellafane, are what makes the convention exciting and truly a shrine to the stars. Where else could you meet telescope makers as far south as Florida and Arizona and as far north as Sudbury.

Footnote: On the way back from Stellafane we stopped in Ottawa for the night. The next morning, thanks to Steve, we got to meet Fred Lossing. Unfortunately, we only got to talk to him for three-quarters of an hour. The man is so down to earth and easy to talk to, I wish you could all meet him.

- Fred Boyer, 1983.

Space News: James McDivitt (June 10, 1929 - October 13, 2022)

By Steve Dodson



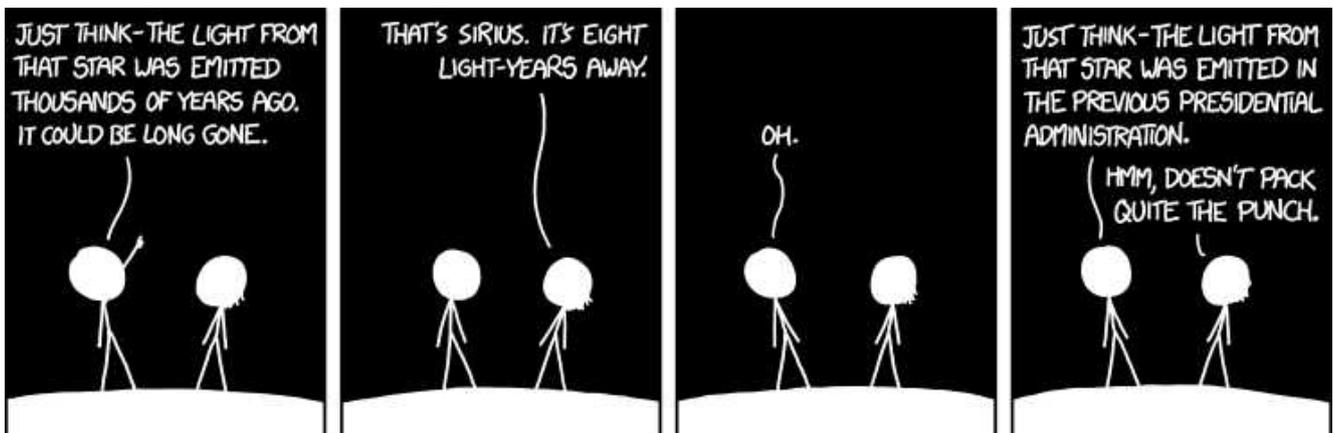
McDivitt may not be a familiar name, even though he was an Gemini and Apollo astronaut. That may be because his spaceflight assignments did not include a moon-bound mission. But he was NASA's Apollo Spacecraft Program Manager from 1969 to 1972, and the Gemini 4 and Apollo 9 missions that he commanded did much to develop NASA's ability to conduct the Moon Landings.

In the days when astronauts were recruited mainly from the ranks of experienced jet pilots, Jim McDivitt was an obvious choice. He was a US Air Force Test Pilot after the Korean War, in which he flew 145 Combat Missions. The first NASA Spacewalk - an important requirement for a moon mission - was accomplished by Ed

White on the Gemini 4 mission commanded by Mcdivitt.

Four months before McDivitt's Apollo 9 mission to low earth orbit, Borman, Lovell and Anders had flown around the Moon in Apollo 8. Of course they did not land. The compartment which would carry the Lunar Lander was empty - the "LEM" was not even ready yet!

The first mission with the complete spacecraft and lander was Apollo 9, when the complete mission sequence was practised close to Earth. Under McDivitt's command, the Lunar Module for the first time was docked with the Command Module and prepared for a "mock" Trans-Lunar Injection manoeuvre. In another 4 months Apollo 11 did that for real, and the rest is history!



RASC Education, Public Outreach & Observing News

2022 Event Calendar

<u>STAR-PARTY</u>	<u>LOCATION</u>	<u>DATE</u>	<u>STATUS</u>
Frozen Banana	Mew Lake, Algonquin Park	May 5-8	
Thawed Banana	Chapman's Field, South River*	May 26-30	
New Moon in June	Chapman's Field, South River*	June 23-26	
Gateway to the Universe	Chapman's Field, South River	July 28-31	
August Star Party	Chapman's Field, South River*	Aug 25-28	
Half the Night	Halfway Lake P.P**	Aug 25-28	
Last Chance	Restoule P.P*	Sept 22-25	
Stars Over Killarney	Killarney P.P**	Sept 30-Oct 2	

*Contact Robert +Lil Chapman if wanting to attend bobandlil14@gmail.com

Contact Linda Pulliah if wanting to attend pulliah@fibreop.ca **705-671-8127

Updates

Currently the provincial parks are planning to provide public programs; we will be leading outreach events when in parks.

Due to restrictions in space, it is imperative folk contact the Chapman's or Linda Pulliah above as indicated for certain events.

We are being optimistic and excited to proceed with the 2022 star party season as listed, however, we will follow provincial guidelines if further restrictions are imposed. If uncertain, just contact those listed above.

Science North encourages RASC-Sudbury members to participate in their virtual and on-site in-person astronomy events. Visit sciencenorth.ca/planetarium#starpatries for info on date and times.



Burwash Bones says:



Photo credit: Ron Prediger

**I came for the Occult, but
stayed for the Occultation of
Ganymede!!!**

Looking Up: November 2022

By Stargazer Steve/Steve Dodson

November Skies

If you like your **Eclipses** frosty and early, there is an event for you on **Tuesday Morning November 8!** This is a **Total Lunar Eclipse**, with the **Moon** still partly in the dark part of **Earth's shadow** at moon set and sunrise.

The Umbra (dark core of Earth's shadow) will begin putting a "dent" in the **Full Moon** shortly after **4:00 AM EST**, with totality starting at **5:16 AM**. The darkest part of the eclipse will come at **5:58 AM**, when the southern limb of the Moon will be at the center of Earth's shadow. Moments after **Sunrise**, the **setting full Moon** will have mostly recovered its round shape.

The **Moon** starts off the month hanging **4.5 degrees** below **Saturn** on the evening of Tuesday **November 1**. On meeting night (**Nov. 4**) the **moon** will be even closer to **Jupiter**, making a brilliant pair. On the evening of **Eclipse Day** the **Moon** will close in on the **Pleiades Star Cluster (7 sisters)**, making its closest approach before dawn **Wednesday Morning November 9**.

On the **evening** of **November 10**, the **moon** makes a close pairing with **Mars**, closing in on the Red Planet during the night.

Leonid Meteors may reach a peak late on the night of **November 17 - 18**, with a possible surge in activity after midnight (**1:00 - 2:00 AM early on November 18**).

For more details, and reminders in the hours before Sky Events, check postings on www.sudburyastronomyclub.com



To see more, visit the club website or follow Steve on Twitter at **@StargazerSteveD** for daily updates.

This Issue is dedicated to a great and dear friend to many of us. Linda Pulliah touched us in many ways. It was through her passion and excitement for all of the things that she did, including Astronomy. She loved educating the public about the wonders of the night sky, and she did it with such passion and awe. She was the organizer of our many starparties, and her presence will be dearly missed. Thank you Linda for giving us so many great memories. You will forever be in our hearts. Whenever we look at the night sky, you will be in our thoughts.



Linda Pulliah 1956-2022

A Video that encapsulated the feeling she believed in when teaching others about Astronomy.

<https://www.youtube.com/watch?v=XCcrJ3NfI0pE>

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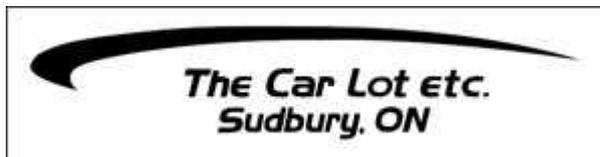


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 Please visit our friends of the North Bay Astronomy Club at <http://www.gatewaytotheuniverse.org/>

