41 YEARS!
1981-2022

RASC SUDBURY CENTRE

Up Above, The Heavens Await

RASC SUDBURY CENTRE ASTRO-NORTH | Friday May 6th, 2022

www.sudburyastronomyclub.com
Facebook: www.facebook.com/groups/RASCSudbury/

Meeting Agenda, 7:00PM

1. Sudbury RASC President Address – Alan Ward

2. Jim Fairles - James Webb Space Telescope

3. Break - (10min)

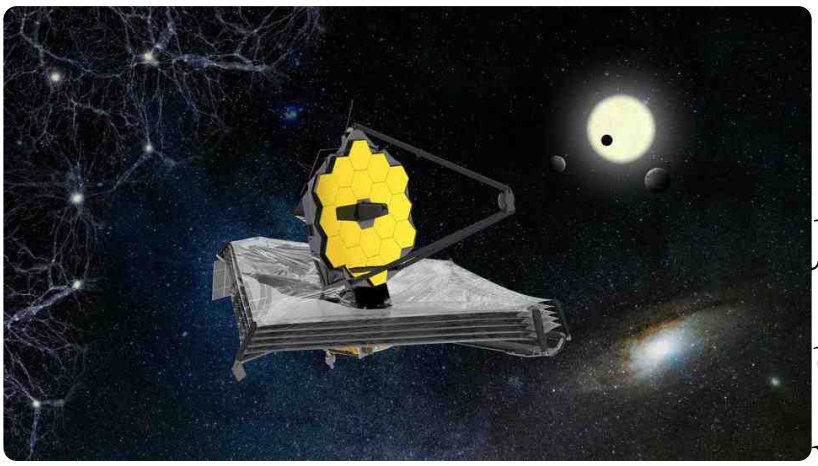
4. Show & Tell

5. Trevor Chandler - Astronomy Jeopardy

6. Closing Comments/News/Open Forum/Starlight Lounge

This Evening's Presentation:

Jim Fairles



The James Webb Space Telescope

Jim Fairles will give us the ultimate story of the James Webb Space Telescope.

From its conception, to its launch, and its proposed mission of replacing the Hubble Telescope, this is a comprehensive talk giving us all the juicy little details.

-==Join us!==-

Friday May 6th @ 7PM

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=XCrJ3NflOpE

Editor's Voice

Keen eyes will have noticed that the name of the newsletter, both in print and file name has changed. This is in reference to the name of the Sudbury Astronomy Club's very first newsletter, tying it into our 40th anniversary and it's what it will be called from now on. Enjoy!

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

Centre News

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

Solar System Walk Update by Norm Hey

On Tuesday, February 15th 2022, a team from Sudbury RASC and Science North presented our concept for a Solar System display spanning Science North to the east end of the Bell Park boardwalk to the Tourism Development Committee of the City of Greater Sudbury seeking their financial support.

The following day, we were informed that the TDC approved our proposal and recommended that the Greater Sudbury Development Corporation support us fully.

On March 10, we were informed that the GSDC will support our project with a $10 000 grant. This, along with $12 000 from Science North and $5000 of in-kind support from Petryna Advertising and our pledge of $1000 of in-kind support through educational outreach, allows us to press ahead with content creation, design finalization and production, with a tentative and ambitious installation date of June 21, 2022—the Summer Solstice and National Aboriginal Day.

Norm Hey and Dr. Olathe Macintyre will be working with Petryna and Science North staff on the installed version. A QR code on each plaque of the display will connect users to a website which will be created and maintained by Science North. Each Solar System object will have its own space within this website with significantly more information about it and links for further exploration.

Anyone interested in helping to create content for this website is urged to contact Norm either by email or phone. **ntphey@gmail.com** or **705-561-0523**

Note: You must be on the mailing list to receive the Zoom meeting invitation. The meeting links will not be posted in the newsletter. This is for security purposes. To request being on the mailing list, please contact us via our website via the Contact form on the Contact Us page. Note that replying as a comment on the website will not get that request seen through the proper channel.

Community Contributions

Almost Tanning Season

by Norm Hey

It's starting to get nice out. But if you lived in the galaxy NGC 4647 or even M60, both of which are about 60 million light years away, in the Virgo Galaxy supercluster, you might be getting quite a burn.

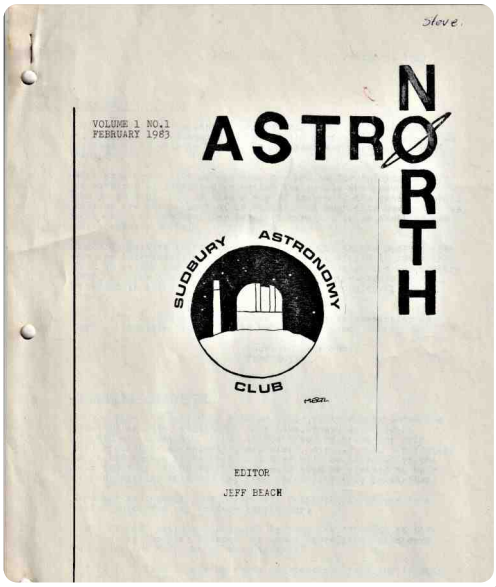
The indicated star is not in our galaxy. It is a single star in that fuzzy spiral galaxy, yet it looks brighter than the whole galaxy! Because it is! It is what is known as a supernove, but not all supernovae are the same. This is a Type Ia supernova. These guys happen in binary star systems (two stars gravitationally bound and relatively close to each other) where one or even both have become white dwarfs, so what our sun will become in its old age. Gas from one flows onto the white dward and eventually enough falls onto it that its mass exceeds the mass that can be sustained or supported by the energy flowing out from the core of the star and this matter and that of the white dwarf start to fuse. It happens so rapidly that huge amounts of energy are released and the star literally explodes, expelling matter outwards at up to 20 ooo km sec or nearly 3% of the speed of light. The star itself becomes about 5 billion times brighter than our Sun, albeit only for a brief period of time, usually in the order of weeks. This guy went off sometime around April 16th—at least that is when it was first reported.

I got this picture last night with 15 2 minute exposures, but it clearly shows up on a 15 second exposure! It is a black and white image, or monochrome image, taken with my monochrome astro-camera and my usual refractor telescope and mount setup. Nice to finally get some clear skies again!

Two images—first unannotated and the second showing where the supernova is. It is probably only visible in a modest sized telescope, but pretty cool nevertheless. Hope you like this. If you want to learn more about supernovae, this article is a good place to start.

https://en.wikipedia.org/wiki/Type_Ia_supernova

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.



Stellafane or Bust - by Fred Boyer - AstroNorth September 1983.

Zero; 9:00 a.m.; Aug. 3, 1983. The longest trip my van had ever undertaken had begun. . Every last detail for our trip had been taken care of, so I thought. We were headed to Southern Vermont to attend the annual Stellafane Amateur Telescope Makers Convention. The members of our expedition were myself, Greg Beach, Gerry Bourque, Steve Dodson, his daughter Natalie, and the Phoenix, Steve's 22" telescope.

The first leg of our journey was to have taken us as far as the American Border. There, we would stop for nourishment and a short rest before continuing on to Waterbury, Vermont, which was about 2 hours drive from our destination and our sleep stop for the night. BUT our first major stop turned out to be the Canadian Tire in Sturgeon Falls.

As I had helped hook up the Phoenix, I noticed a gas leak in Steve's driveway. Also about 20km down the highway the heat gauge in my vasn was hovering dangerously close to the overheating area. I had forgotten that I had a winter thermostat in the motor instead of a summer one.

After two attempts at installing the new thermostat and pouring half a tube of Seal-All on the gas leak we were on our way again. Unfortunately, we were 2 hours behind schedule.

We reached the American border, relatively incident free, around 6:30pm at Cornwall Ont. The American customs official wanted to know what the heck we were hauling. We explained that it was a homemade 22" Newtonian telescope but the blank look on his face still remained and we would have to talk to another customs official. After discussing things with the next officer for about 15 minutes he let us go through writing us up as a homemade boat and trailer.

During our supper at a large truck stop just down the road from the

international bridge, Steve, who had been this way before, suggested a short cut through some very pretty farm country and small villages that reminded me somewhat of Eastern Ontario except the roads were well paved.

We made up approximately ½ hour in time so I asked Gerry Bourque to take the wheel for a while. This turned out to be very mean of me. He hadn't had time to get used to the pull and width of the trailer when we ran into construction and very narrow bridges. One bridge in particular only allowed 3" of clearance. In spite of the above hazards Gerry and the Phoenix came through it without a scratch.

By the time we got into the hills of Vermont it was dark and we couldn't see too muich. I think by that time we were all looking foreward to bedding down for the night. Steve had booked us some rooms at the Waterbury-Stowe Vermont Holiday Inn, which is a very famous winter ski resort area. The entrance to the inn gave us some idea of just how steep the hills in this area are. It felt like we were going straight up the side of a mountain. The next morning after a hearty breakfast we found that we had come up the side of a mountain. Off in the distance you could see the taller mountains poking their forest covered peaks through the morning mist. We were in sunshine while below the valleys were still shrouded with cloud cover.

Back on the road again our spirits renewed after the long and tiring trip of the previous day, our excitement began to build the closer we got to Springfield. The views along the interstate highway were breathtaking and helped to increase the excitement.

Two hours of gorgeous vistas later we were in Springfield. This is the town where an amateur astronomer by the name of Russel Porter began making telescopes. His designs were eventually used for the mount of the 200" Hale reflector on Mt. Palomar in California. But some people will say his most important contribution to amateur astronomy was the founding of Stellafane.

As Steve guided us through town, he warned me that the Breezy Hill road was hard to spot and that he had missed it the previous year. Sure enough I had almost missed it too but made the turn after putting everyone in the front seat with me. We headed up Breezy Hill - and up, and up, and up. In fact we climbed approx. 500 feet above the town. Not very high you're saying to yourself. That 500 foot climb is done in less than 2 miles.

At the gate and giving out the camping permits was Dennis DiCicco,

one of the editors of Sky and Telescope Magazine, who immedately recognized the Pheonix. Once through the gate and across the campsite we were headed up to the clubhouse. As you come up the final small hill a small white building catches your eyes. It's the world famous Porter turret telescope. It is then that we realize, "We made it, we're here!"

Stellafane not bust.

Next month a story of two days of heat, celebrities, telescopes, clouds, disappointment and excitement.

- Fred Boyer

Space News: A Tale of Two Tails

By Steve Dodson

Ever since its discovery in 1930 Comet Schwassmann / Wachmann - 3 (SW3) has returned to the vicinity of Earth about every 5 years (often un-noticed), UNTIL it broke up in 1995!

Since then an increasing collection of co-orbiting fragments put on good shows in 2000, 2006, 2011, and 2017. The collection of fragments has been releasing dust and granular debris along SW3`s orbit. One of these clouds of debris MAY pass close to Earth as we near SW3`s orbit around 1:00 AM EDT May 31.

It is impossible to accurately predict whether Earth will pass through the cloud, and how many meteors might be visible, but there is at least the possibility of a new meteor shower. If so, the expected radiant would probably be near Arcturus.

If particles in the debris cloud do enter our atmosphere, predictions of the meteoric activity levels vary greatly. If the evening of May 30 is clear, it might be worth while to head out to a dark site before midnight and to maintain the vigil past 1:00 AM May 31.

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MERCURY HAS A TAIL! (And an amateur astronomer imaged it!)

Using a 66 mm, a Pentax DSLR, and a narrow-band filter, an Italian amateur astronomer Andrea Alessandrini imaged a trail of sodium atoms dislodged from the planet`s surface by micrometeorites and solar wind. A 7-minute guided exposure was needed to capture the extremely tenuous and faint tail.

Once sodium atoms are liberated from mercury, they are pushed back away from the planet by the Solar Wind, much as a comet`s evaporated gasses are. At Mercury's distance from the Sun, the Solar Wind is about 10 times stronger than in the vicinity of Earth.

Duplicating Mr. Alessandrini`s feat requires a combination of mercury being at the peak of a favorable apparition (Such as is the case in early May), AND the availability of extremely clear transparent Skies!

RASC Education, Public Outreach & Observing News

2022 Event Calendar

STAR-PARTY	LOCATION	DATE	STATUS
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#starparties for info on date and times.

Looking Up: May 2022

By Stargazer Steve/Steve Dodson

May's Evening Star in the Northeast
VEGA: "Queen of the Summer Sky"

Does that make sense ?! I mean, we are still waiting for **Spring**, and the lead star of the **Summer Triangle** is prominent in the **Northeast**!

The dazzle of **Vega** is distinctly blue-tinted because of it's high temperature of almost 10,000 degrees C, which also give this star the luminosity of **37 Suns**! At a distance of about 25 light years, **Vega** is a prototype "Zero-Magnitude" star.

Vega, like **Regulus**, is a fast rotator: it spins at 92 % of its "Breakup Speed"! Its "north pole" points towards us. If the hypothetical planet of Carl Sagan's "Contact" exists, it`s north pole would probably also point towards us, meaning that the **Sun** would be its (faint) North Star!

The **May** Sky offers plenty of action, and it`s not all in the early morning! **Mercury** is back in the Evening Sky, and the evening of **May 15** offers the best **Lunar Eclipse** in 2 years (weather permitting!). **May** opens with a very close conjunction of **Venus** and **Jupiter** (0.5 deg.), and closes with an equally close **Jupiter-Mars** event!

Before bedtime on **April 30**, set your alarm for about **6:00 AM Sunday May 1**, and aim your scope at dazzling **Venus** - **Jupiter** will show in the same eyepiece field!

On the **Evening** of **May 2**, **Mercury** appears close to the **Pleiades (Seven Sisters)**, to the upper left of the cluster, and below a thin **Crescent Moon**.

The **Moon** enters the dark part of **Earth's Shadow** around **10:30 PM** Sunday Night **May 15**, and exits before **1:00 AM** Monday. Watch for Emails with viewing details.

On the Morning of **May 27** the **Crescent Moon** is only 3.5 degrees from **Venus**. And two days later **Mars** and **Jupiter** are separated by only a half-degree in the pre-dawn Sky!

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.

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