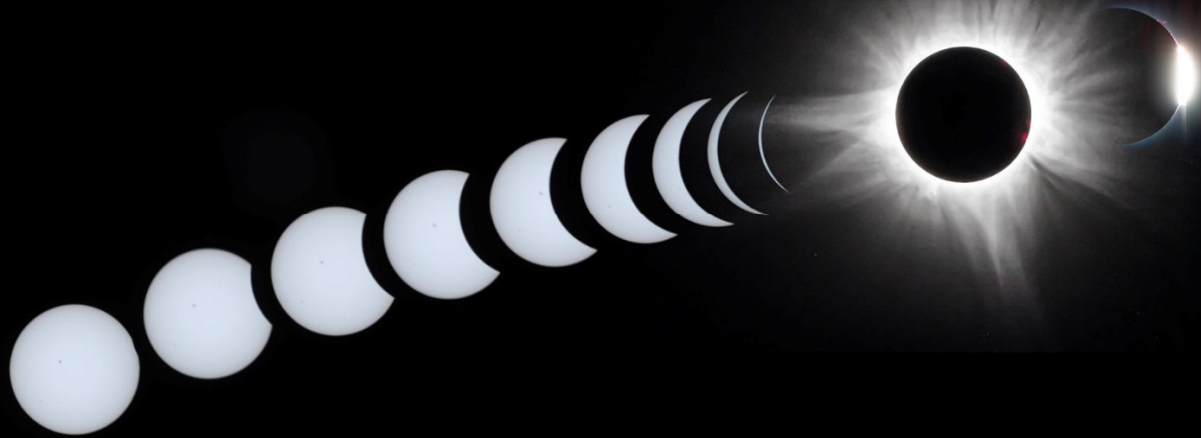


# SKYNEWS



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## 2024 Solar Eclipse

Composite of the total solar eclipse of April 8, 2004, from the Discovery Princess roughly 100 miles SW of Mazatlan, Mexico. 2024. First contact was at ~9:44 am, second at ~11:00 am, and totality ended at ~11:04. The partial phases were taken at 10 min. intervals.

*W J McDonald*

## Total Solar Eclipse observed from the Discovery Princess, 150 nmi SW of Mazatlan, Sinaloa, Mexico

*by Joe Carr*

I observed my fifth Total Solar Eclipse from the Discovery Princess cruise ship, 150 nmi SW of Mazatlan. We had near-perfect skies thanks to the superb skills of the bridge officers, and my balcony faced south as the ship tracked the path of totality at the appointed time under the Moon's shadow, making observing and photographing this spectacle easy and comfortable.

During the 4.5 minutes of totality at 11am local time, both Venus and Jupiter were visible, and watching the shadow approach from the west and retreat eastward was a lovely sight. Every solar eclipse is unique – this apparition offered beautiful, large solar prominences either side of a breathtaking diamond ring as totality ended at C3. I measured a 10°C temperature drop with my portable weather station as the eclipse progressed from C1 to C2 and C3.

My fellow Victoria Centre members John McDonald and Bill Weir were aboard the same ship as me, and Miles Waite was enjoying the same beautiful view while aboard the Ruby Princess, only a few miles away from us. We remembered the 2017 Total Solar Eclipse (and Diane Bell) at breakfast when the ship's pastry chefs served eclipse cookies.

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## Eclipse Chasing on the 401

*By Chris Purse*

Christine and I went to Ottawa to visit my sister-in-law. The plan was for the 3 of us to spend Sunday night in Kingston, so we did not have to worry about traffic on eclipse day, and watch it there. I had been looking at the cloud forecast as I had noticed that clouds were expected to build up enough to obscure the eclipse. We discussed this and decided to be prepared to move in the morning if the updated forecast continued and traffic conditions looked fine.

Eclipse day started with the forecast remaining poor for Kingston and the highway toward Montréal moving freely; we packed up and headed east. When we stopped for gas mid morning, I checked the forecast and it looked like the leading edge of the cloud would cover all of eastern Ontario by eclipse time. We decided to head to Québec. I chose Beauharnois as a destination as I had visited the nearby seaway lock as a child.

We got there, found a riverfront park that looked suitable, then went for lunch. We set up in Parc Sauvé about 30 minutes before first contact. There was a great atmosphere with a number of people gathering. The cloud had arrived but was never thick enough to be a problem. With filtered binoculars, I saw first contact and we watched the eclipse build with eclipse glasses. Being April, the temperature had dropped markedly and it was interesting to see lights in the park come on. As totality neared, around 60 people were in the park. Totality started with a stunning diamond ring and we could see some pink corona. We had just over 2 minutes of incredible totality. We were treated to another diamond ring and, sadly, totality was over.

Due to the distance back to Ottawa, we did not stay to watch the remainder. Luckily, we encountered moderate traffic only when close to Ottawa. It was a superb eclipse and we enjoyed it even more than that in 2017. Thanks to Reg for providing the weather link, instructions for using the predictions, and the encouraging an eclipse chase!

# Total Solar Eclipse

*by Nathan Hellner-Mestelman*

A sliver hangs in the sky.  
Subliminal enough to miss with  
A thin filter, still emitting enough luminosity to keep  
The colossal city sunlit, daylight dimming bit by bit  
As a distant unstoppable rock  
Drops an awesome window of darkness.  
People freak in nervous primal verses as the cosmic rock  
Creeps onward with its otherworldly circular surface.  
Now an unfathomable blackness begins to rise up above  
The horizon, eyes widened, looking up  
As the entire sky shatters  
Into a fractured blasphemy of blackened bluish hues.  
A sunless chill brushes over the grasses—the breeze has  
Dropped to freezing without  
The golden caress of starlight.  
Crowds erupt into animalistic howls as a final dimming  
Glimmer of sunlight shimmers at the brink of a dazzling  
Ring that sinks the city into nightfall.  
A sudden brightness  
Shines as every automated light in offices across  
The metropolis shine out and cry out to the populace,  
Each as confused and deluded as every other human and animal.  
Animal and Human.  
The two words suddenly merge  
As birds are disturbed in this absurd otherworldly occurrence  
And cease their chirping, and people scream in a  
Seething, maddening mass of disbelief  
And the skies are blackening.  
The view overhead strains the bounds of reality as the galaxy  
Lights up the skyline at a time that demands sunlight shines.  
In starlight's place is a blackened

Circular chasm with streaming  
Gaseous plasma where the forsaken star once shined.  
Its border peppered with reddish speckles of hydrogen  
Rising high above its curdled surface,  
Each far larger than the Earth is,  
Appearing like tiny birches sprouting off the universe.  
A deafening silence befalls the crowd, wonder swelling  
In the bellies of every human  
As nations and race are erased from  
Existence for merely a minute, but vividly,  
Hands clutch the hands of others,  
Their colour smothered by the darkness.  
Every adult, too often swamped with  
Nonchalant miserable earthly business,  
Is instantly lifted with childlike curiosity,  
Bearing witness to infinity's distance for  
Just a minute,  
Every smidge of our trivial  
Unconditional hatreds trickle away  
As we are left contemplating the unimaginable  
Magnitude of you versus the universe,  
Immersed in this tender verse,  
And suddenly, a screaming beam of gleaming sun leaks  
And smashes across the blackened landscape, and now it's  
Back to reality.  
Back to the ground.  
Back to looking down.  
The people speak their observations—their star's obscuration.  
The sound's obscuration. The light's obscuration. It's always  
Something missing and obscured,  
For too long they've been inured  
On the surface of this world to see what's revealed  
In that fleeting minute of blackened skies and horizons and

Planets and galaxies in broad daylight,  
The same view that was already shining  
    And has constantly shone  
        Just beyond the thin thickness of our atmosphere,  
            Whether the weather was rain or shine,  
                Every second our lives pass by, just beyond the  
                    Cordial blue blanketing skies that wrap themselves over  
                        Our heads and let us forever pretend that  
                            Infinity doesn't exist.  
                                The universe is drowned in an inverted  
                                    Ocean of oxygen, fooling us in the delusion  
  That the sky's the limit  
  Except when a cosmic shadow smashes  
  A circular chasm in the atmosphere  
  And we see it clear,  
  Everything that was already there, see  
  How quickly the heat dissipates without  
  A star to emit and reciprocate it  
  Constantly, how quickly the heated arguments  
  Diminish when we remember  
  We're living on a forgotten rock that's unavoidably  
  Rocketing through a bottomless void, and when people peered  
Through the shadow, past the atmosphere,  
    They saw  
    For a fleeting instant  
        Reality.  
    And they may never  
        See it again.

## Member Profile of the Month: Nathan Hellner-Mestelman

Nathan has been interested in astronomy for almost 16 years. He is 16 years old. He remembers stargazing when he was 5 years old with his family up on Moss Rock, near his house. An important event that nudged Nathan on his path to self-identifying as an amateur astronomer was getting excited on seeing the Cassini Division in the rings of Saturn through the eyepiece of a RASC-member's telescope at a Friends of the DAO Star Party. After the 2017 eclipse, and at the advanced age of 10 years, Nathan joined the RASC and bought his own 8-inch Dobsonian telescope from Bruce Lane at Quarky Science. And now he is a regular volunteer with his telescope at the FDAO Star Parties.



Nathan is a master at taking photos through his telescope eyepiece with a handheld mobile phone camera. He has made several remarkable collections, including the phases of the Moon and of Venus, all the solar system planets and Pluto, and he is well on his way at capturing the full range of Saturn's rings' tilt. He perseveres with this imaging method, partially because it works with the equipment he has, but also because he wants to push the capability of the method.

He is an excellent observer, but he also particularly well-read in astrophysics, astrobiology, and cosmology, making him an excellent "Ask An Astronomer" volunteer. He was also the most active member of the three-person Team-RASC at the Friends of the DAO's recent games night. Realizing that science humour has a lot of potential, Nathan uses his profound knowledge of astronomy to twist our understanding of what is important and



how we interact with the universe. Along with his abilities with sketching and video making, he produced a web-comic (Nerd Anomaly), several videos (including Seeing Beyond), and now the book “Cosmic Wonder: Our Place in the Epic Story of the Universe”. (Victoria book launch at Bolen’s Books, Tuesday May 7, 19:00)

Nathan started the Mount Douglas High School Astronomy Club, which evolved into a STEM (Science Technology, Engineering, and Math) Club, which evolved into a Science Fair Club. For the first time ever, his school will have five projects entered into the Vancouver Island Regional Science Fair. In 2022, he was a finalist at the Canada-Wide Science Fair for his project on the optimal orbit for satellites to orbit the earth without leaving debris. With other teenagers from the USA and Brazil, he started the organization “Cosmic Generation”. He is serving his second year as a National Representative for our RASC Victoria Centre.

His enthusiasm for astronomy is infectious. He turned his family into astrophiles. His obliging friends join him for his birthday parties at the Centre of the Universe. And we all love his eclipse and transit cookies!

Nathan says a decade of obsessive astronomy has given him an appreciation for the little things. He says: “Something as feeble as the human mind cannot comprehend the universe. Try to be content with this fact”.

*Randy Enkin*

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## Total Apoceclipse

*Nathan Hellner-Mestelman*





## President's Message

What else can I write about or even talk about other than that celestial event that took place on April 8?

I had seen the 1979 eclipse in Manitoba and the 2017 eclipse in Oregon. After 2017, all us eclipse addicts faced a difficult decision: where should we go to see the 2024 total solar eclipse? The decision wasn't simple because of the path of this eclipse and the fact that April weather is more problematical than the August weather conditions in 2017.

In part because of the pandemic, I didn't make arrangements for the eclipse years in advance as I had done for 2017. As 2024 dawned, I concluded it was too late to arrange a trip to Mexico or Texas for a reasonable price. I know many people in Toronto, but I felt that too many people chasing the eclipse in Hamilton and environs might complicate things. So I decided to go to Windsor, Ontario, just outside the path of totality. We have relatives there, and it would be relatively easy to cross the border there to chase the eclipse in Ohio if necessary. But it was still a big gamble, and I made sure I had other things to do to justify the trip.

As April 8 got closer, weather predictions called for clouds in southern Ontario, and when I arrived in Toronto on April 4, I was greeted with cold, cloudy and rainy weather. Two days before the eclipse as Audrey and I made our way to Windsor, the skies cleared. Things were looking more promising, but clouds were still predicted for the eclipse.

The night before, the prediction was still more promising for Ohio than the Windsor area, and Ohio locations were closer to the centreline of the eclipse, which promised a longer period of totality. I prepared to cross the border.

April 8 dawned in Windsor with blue skies. The forecast still called for clouds in the mid afternoon, when the eclipse was due to take place. The forecasts for Ohio called for longer periods of cloudiness in the afternoon, which I feared meant thicker clouds, and so I decided to stay in Canada.

Audrey and I, along with her sister and her husband, drove south from Windsor through Amherstberg into the path of totality. Many eclipse chasers in the area were already arriving in Point Pelee Park, which was closer to the centreline but involved very limited access, so I thought we might set up in Leamington. Before we got there, we found a great spot to watch the eclipse at Colchester Harbour and Beach. The RASC Windsor Centre had set up tents and telescopes there, a restaurant, coffee shop and other facilities were nearby, and scores of people were already settling in to watch the eclipse over Lake Erie.

Looking south across Lake Erie, we saw a bank of clouds that everyone hoped would stay where it was. But true to the prediction, the clouds moved our way and covered the sun as the partial phase of the eclipse began a little before 1 p.m. Fortunately, the clouds weren't very thick.

Finally, at about 3:12 p.m., totality began. We were amongst the first to see totality that day from Canadian soil. The transition from needing eclipse glasses to full totality with the naked eye seemed to be prolonged



to me, but finally we got our 90 seconds of totality and dark skies. Venus was plainly visible through the thin layer of cloud, but I don't recall seeing Jupiter or any other celestial object. The incandescent but not overpowering glow of the Sun's corona took centre stage.

In the moments before and after totality, the lighting of the area took on a strange hue. During totality, my viewpoint overlooking Lake Erie allowed me to see the approaching "sunset" to the west and the receding "sunrise" to the east. During this time, I took a couple of photos of the sun and of the light effects around the horizon with my iPhone, and I set up my iPad to film totality. I wanted to spend most of totality enjoying the view rather than messing with cameras.

All too soon, totality was over, and soon people started to leave. We remained for most of the rest of the eclipse to savour the incredible spectacle. By the time we got back to Windsor, all the clouds had disappeared. So had the crowds, and as a result we encountered no traffic jams.

The hours and days that followed became a gigantic debrief on this event. Who got a good view of the eclipse? Who got skunked by the weather? The evening of April 8 I joined many of you in an online Astronomy Café.

It turned out that Joe Carr, John McDonald and Bill Weir got a great look at the eclipse from their cruise ship, The Discovery Princess, and the poor weather in Texas inspired Leslie Welsh to stop in Arkansas to catch the eclipse. Thicker clouds in the Niagara region obscured the eclipse for Jill Sinkwich, Lauri Roche, and Kathie Koziol. Marje Welchframe saw parts of the eclipse through clouds in Kingston. The weather was much better in the Montreal area, to the delight of Randy Enkin, Chris Purse, and Nathan Hellner-Mestelman. Cameron and Lise Burton and Alex Schmid had clear skies in Sherbrooke. The clouds parted for Clayton Uyeda in New Brunswick.

Back in Victoria, David Lee, Kirsten Pedersen and others entertained a good crowd at a rainy Centre of the Universe during the partial solar eclipse here.

Before I came home, I heard about RASC Executive Director Jenna Hinds' successful eclipse trip to Illinois. A few days later I attended a meeting of the RASC Mississauga Centre in person, and I heard about more experiences along the path of totality, including the troubled weather in Texas, which also affected our good friend Peter Jedicke from the London Centre.

So the viewing conditions for the 2024 total solar eclipse turned out to be less than perfect but better than most of us could have hoped for.

Now the question arises - when is the next one? August 12, 2026, in Greenland, Iceland and Spain. In North America, the wait will go on until August 23, 2044. How long will our waits go on? Those decisions are for another time.

*Chris Gainor, [President@Victoria.RASC.ca](mailto:President@Victoria.RASC.ca)*



Chris Gainor waiting for the eclipse with RASC Windsor Centre members Michael Mastronardi and Juliana Grigorescu

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## 2024 RASC General Assembly, May 4 and 5

Circle the dates of Saturday, May 4<sup>th</sup> and Sunday, May 5<sup>th</sup> on your calendar and plan to attend the RASC General Assembly. No traveling, no expenses. Just turn on your computer, grab a cup of coffee, sit back, and take in some interesting speakers and good discussions. We are focusing on RASC members and Centre activities this year. We want to highlight the many programs and events put on by Centres, and the amazing knowledge and talents of RASC members across Canada.

Out here in Victoria the Saturday will start at 9:00 am and go through (with breaks) to about 4 in the afternoon. There will be a speaker on Saturday night along with the popular meeting online meeting room, Gathertown. We'll start again on Sunday at 9 am. On Sunday night we are all invited into the Astronomy Show by members of the New Brunswick Centre.

The schedule is not yet fixed but there will be programs on Green Laser Pointer training, Post- Eclipse discussions, Dark Sky preserves, accessible Observatories, and Lunar sketching with none other than our famous Randy Enkin. This is just a taste of what we are planning.

There will be an announcement from National out this week. Tickets are \$15 for members, \$12 for students and \$20 for non members and will be available shortly. We welcome new members, especially, to join in for any part of the program they are available for to find out more about the RASC.

Stay tuned.....

Lauri Roche

## May Astro-Events (PDT)

Wed. May 1	Last Quarter Moon
Fri. May 3	Saturn 0.8°N of Moon Total Solar Eclipse in London, predicted by Edmond Halley (1656–1742) to within 4 minutes accuracy, 1705
Sat. May 4	Mars 0.2°S of Moon RASC General Assembly! Day 1
Sun. May 5	RASC General Assembly! Day 2
Mon. May 6	Astrocafé, 19:00
Tue. May 7	New Moon 19:00 Book Launch event at Bolen's Books: Cosmic Wonder by Nathan Hellner-Mestelman
Wed. May 7	Pleiades 0.4°N of Moon
Fri. May 10	Cecilia Payne-Gaposchkin, b.1900
Mon. May 13	Astrocafé, 19:00
Wed. May 15	First Quarter Moon Annular Solar Eclipse observed by Francis Baily in Britain first describes “droplets” of sunlight at the moon’s edge.
Sat. May 18	INTERNATIONAL ASTRONOMY DAY 10:00 – 15:00 at the Royal BC Museum 19:30 – 23:00 at the Centre of the Universe
Mon. May 20	Astrocafé, 19:00
Thu. May 23	Full Moon
Mon. May 27	Astrocafé, 19:00
Tue. May 28	Total Solar Eclipse in Turkey, predicted by Thales of Miletus. The eclipse interrupted a battle between the Medes and the Lydians, 858
Wed. May 29	Total Solar Eclipse observed by Arthur Eddington in Sobral Brazil confirms general relativity, 1919
Thu. May 30	Last Quarter Moon
Fri. May 31	Saturn 0.4°N of Moon

## Important Upcoming Events

Fri. Aug. 9 to Sun. Aug. 11	Vancouver Island Star Party St. Stephen's Church, Saanichton
Sat. Aug. 31 to Mon. Sep. 2	Saanich Fair

## Royal Astronomical Society of Canada – Victoria Centre

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