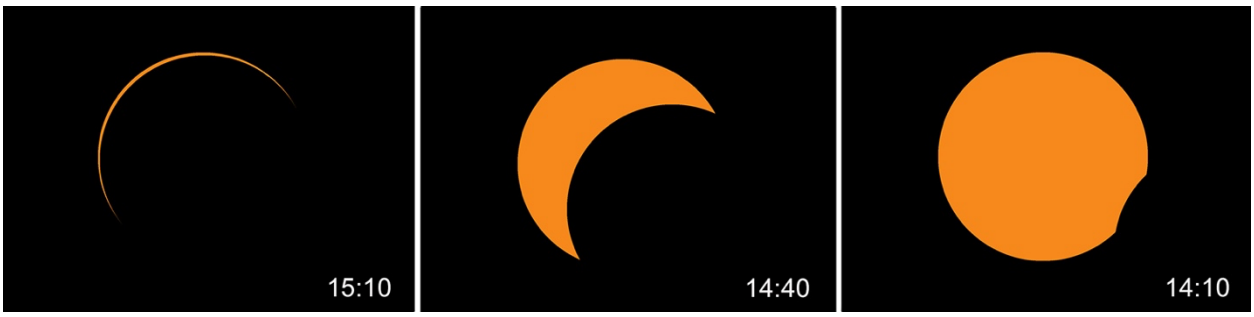
The Total Eclipse in Southwestern Ontario on 8 April 2024

Dear friends and family,

On April 8th 2024 residents of parts of Mexico, the United States and Canada were lucky enough to lie within, or close to, the path of a total eclipse. Waterloo, unfortunately, was not, with a little over 99% of the sun being obscured by the moon. However, since we were less than 110 km from the centreline of totality, we decided to drive south about 80 km to the shoreline of Lake Erie. We could not reach the midline of the eclipse path, the last 30 km being in the middle of the lake and almost at the International Boundary with the USA. Anne and I headed south of Waterloo across country rather than down the main highway which I thought would be extremely crowded with people from Kitchener-Waterloo area going to see the full eclipse. We arrived about 14:10 local time which was about 10 minutes after the sun started to become occluded by the moon. I managed to take a few photographs through filters at this stage, but the real event was still about one hour away.

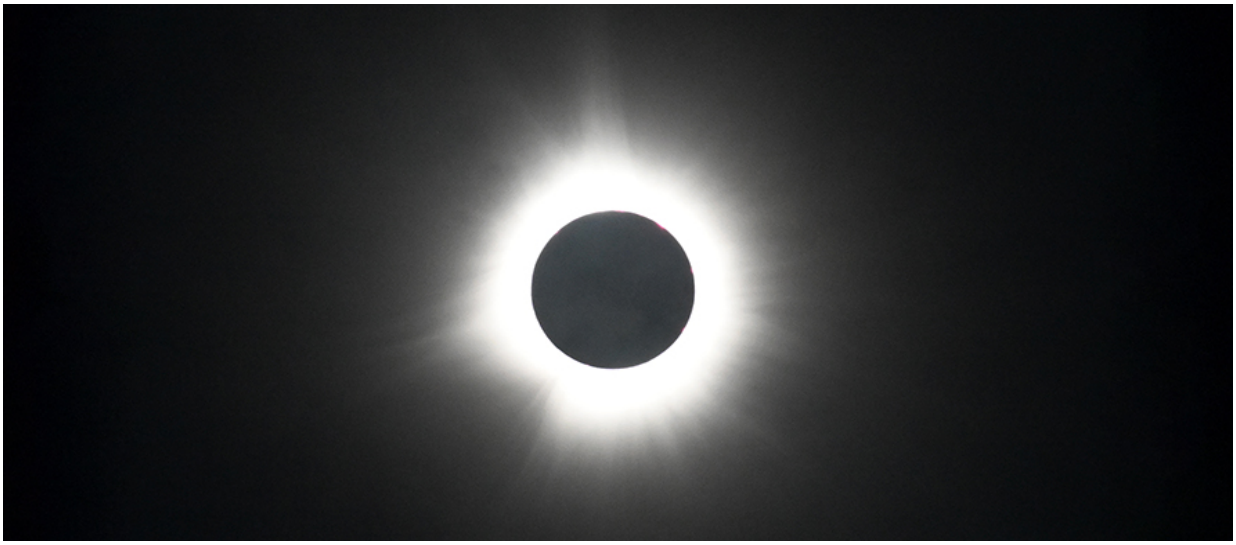
Amazingly the area was quite quiet, unlike the unsettling news from a few that had arrived from Port Dover, some 8 to 10 km farther east along the lake shore, that they described as "very crowded, with no parking spaces". What Niagara Falls would be like with close to one million expected visitors, was difficult to imagine. This influx of visitors was because the Niagara Region was going to be slightly closer to optimal viewing, some 15 to 20 kilometres closer to the path of maximum totality and would get an extra 20 or 30 seconds or so of complete darkness.

We made our way down a few hundred metres along a winding road to the harbour with its small jetty, delighted to find only a small group of people on the jetty that jutted out from the shoreline. There were about 15 to 25 people huddled down from the cold wind blowing off the lake, and perhaps a hundred or more along the shoreline to the east. At 14:30 we settled down on the west side of the pier (left above) that gave us an un-obstructed view along the north shore of the lake, with the sun about 50 degrees above the horizon. However, at 14:40 as I took another filtered image (middle below) we all noted with concern that there was a high cloud cover moving in swiftly from the west (above right). It appeared that our 'optimal viewing' that had been a completely clear blue sky was going to be obscured, or it was going to be a close call between clouds and a blue-sky view. However, at 15:10 the edge of clouds cleared the sun and there was a gradual (but perceptible) darkening of the sky that started a few minutes later. Both Anne and I were still quite amazed at the amount of light that was reaching us from the sun, even though at this stage probably over 99% of the Sun's surface was obscured by the moon as the filtered images below show (left).



At 15:15 we could see darkness swiftly approaching nearly approximating a full-moon night sky (below). There was still a fair amount of light on the surrounding landscape, but it was bathed in an abnormal set of strange and slightly off-colour hues (left below). The sky changed from a cobalt blue to a very dark purple-blue colour with violet, red and orange pastel hues on the distant western horizon (seen left).

I was busy trying to take a few images, and if I ever see this again, would perhaps pay more attention to the reaction of people close by. At 15:16 it was almost as though someone had suddenly flipped off the light to the world, and we entered the full eclipse stage. The sun vanished, totally hidden by the moon. This was a mind-blowing event!



There seemed to be a collective gasp and expressions of surprise from everyone near us as a surreal and very strange lighting took over (above, and on the next page).

A solitary 'star' (I must look this up, but I suspect it was Venus), appeared below the position of the sun and moon. The sun was completely obscured by the black disc of the moon which had a brilliant white-light halo spilling out on all sides. (On the previous page the very dark purple-blue sky in the telephoto shot appears black as the camera adjusted the lighting).

With my 400 mm lens I could just detect the pink glow from solar prominences erupting from the surface of the near-moon halo. Many people describe this as being a religious experience, but as persons who are more interested in the sciences, we both found it to be beautiful, surreal, remarkable, awe-inspiring; - and a quite unearthly event! In the 'darkness' of totality the western horizon was illuminated by the orange glow of a false 'sunrise' as the moon's shadow raced toward us. This was an apparent sunrise in the west!

I am unsure how people who were slightly outside the main shadow of the eclipse found this experience, but being inside the complete shadow effect for almost 3.5 minutes was something that neither Anne nor I will ever forget. Putting this in a ranking with 'spectacular effects of nature' I would place this event as equivalent to watching an active volcano at very close range but, of course, this eclipse was completely silent except for the gentle swish of the waves lapping against the jetty.

I hope this gives you some impression of 'our' total eclipse, and I have embedded a few images that perhaps will give you a slight view of this fantastic sight. However, the camera-captured images have only a fraction of the impact that a total eclipse has through your own eyes which are so far beyond the capabilities of any single camera lens. I suppose it is because your mind puts together the reality of all the myriad of senses that are all around you and not just the isolated individual scenes captured by a camera image.

About 3 minutes and 20 seconds after everything went dark, the sun suddenly blinked into existence as it reappeared from the occlusion of the moon. The passage from full eclipse totality to near-full sun was captured below. The total length of the eclipse was a little over two hours from the incipient edge of the moon covering the outer rim of the sun to the point when the sun was fully exposed following totality.

For those of you who were unable to see this total eclipse, I think the eclipse transit from Spain to Iceland on August 12th, 2026, would be well worth thinking about. If you are really enthusiastic, and want to see an eclipse in your next re-incarnation, the longest eclipse between 4000 B.C. and 6000 A.D. will be on the 16th of July 2186, and will last 7 minutes 29.22 seconds. Now if you believe that, why do so many people not believe in the science of climate change?

Best wishes and love from us both,

Alan + Anne