

Introduction to the 2024 Solar Eclipse

On April 8, 2024, a total solar eclipse will be visible in parts of Mexico, the United States and Canada, including Hamilton. A total solar eclipse happens when the moon passes between the earth and the sun, and the moon's apparent diameter is larger than the sun's. This phenomenon blocks the light we see from the sun and casts darkness temporarily during the daytime.

What makes this eclipse special?

While not rare, total solar eclipses are also not exactly common. They happen on average about every 18 months. What is rare is having a total solar eclipse in your locality.

This year's event will be the first total eclipse visible in a Canadian province since 1979. The last total solar eclipse visible in Hamilton occurred in January 1925. Hamilton will not be in the path of totality of another eclipse until October 2144!

Where in Hamilton can I see the eclipse?

Hamilton is just inside the path of totality. You can click your location on the map to see the start time (in UTC) and duration of the total eclipse.

Some parts of the region, like Stoney Creek and Winona are closer to the centre of the path and will experience close to two and a half minutes of totality.

Areas to the north-ish of the city are not in the path of totality, including much of Flamborough. Those in Freelton, Carlisle and Rockton will want to head a bit further south to catch the darkness.

See the table below for the duration of totality for different communities across Hamilton

Community	Totality Start Time	Duration
Ancaster	15:18:20	lm 20.5s
Binbrook*	15:17:47	2m 29.1s



Dundas	15:18:21	lm 22.9s
Hamilton (Downtown)	15:18:13	lm 47.1s
Mount Hope	15:17:51	2m 18.3s
Stoney Creek (Mountain)	15:18:04	2m 30.2s
Waterdown	15:18:45	0m 46.1s
Winona	15:18:06	2m 33.7s

^{*}in the chart, the location pin for Binbrook was inaccurate, so the time from Glanford Station was used and should be fairly approximate to the centre of Binbrook

You can search for Ontario communities in the path of totality here.

For the best views, make sure you can see clearly to approximately the SSW. If you're downtown, try to get away from tall buildings that might obstruct your view. Those tucked into the escarpment may want to get away from it a bit in case it dwarfs the view.

Solar eclipse events in Hamilton

There will be many viewing parties and events held across Hamilton.

Here are just a few:

- <u>Tourism Hamilton</u> has a number of designated viewing sites, including:
 - Tim Hortons Field
 - Bayfront Park
 - o Pier 4 Park
 - Confederation Beach Park
 - Hamilton Conservation Areas
 - TB McQueenston Park
- Royal Botanical Gardens is hosting a viewing experience at the Arboretum
- McMaster University has an eclipse viewing party



There are also <u>viewing locations outside the region</u>, including Six Nations and Niagara Region.

Safely watching the eclipse

To avoid damage to your eyes, it's recommended to have specialized eclipse glasses.

ISO 12312-2 glasses can be found for free at the Hamilton Public Library, Tourism Hamilton visitor's centre, Hamilton civic museums, or the McMaster University libraries while supplies last.

You can also order them online, at Loccoco's, or through <u>RASC Hamilton</u>.

Resources

- <u>City of Hamilton</u>
- Eclipse2024.org
- RASC of Hamilton
- McMaster University
- NASA
- https://www.scienceupfirst.com/project/mark-your-calendar-april-8-2024/