



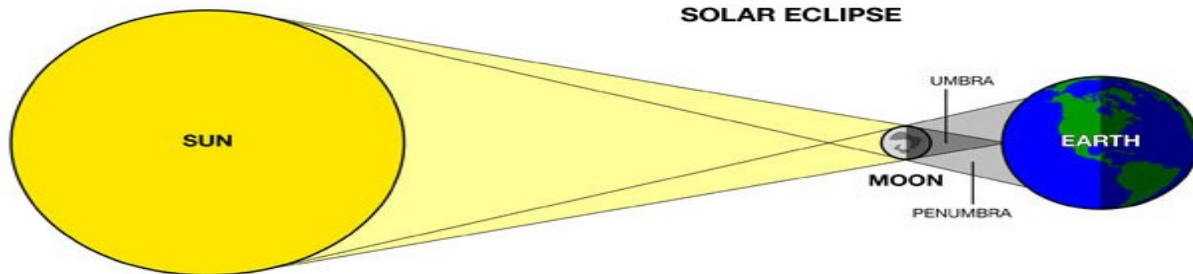
NEWSLETTER

Special Edition—April 8, 2024



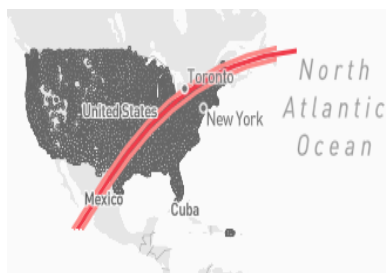
April 8, 2024 Total Solar Eclipse 3:09pm to 3:12pm

Start at 1:59 pm — Solar Eclipse illustrated from beginning to its end—End at 4:25 pm
From the Dayton, Ohio location



On April 8, 2024 a total solar eclipse will cross over North America starting in Southern Texas crossing east to Maine. The total eclipse will be from 3:09pm to 3:12pm as witnessed from the Dayton location. The beginning of the eclipse will be 1:53pm and concluded at 4:46pm.

A solar eclipse occurs when the Moon passes between Earth and the Sun, obscuring the view of the Sun from a small part of the Earth, totally or partially. Such an alignment occurs approximately every six months, during the eclipse season in its new moon phase, when the Moon's orbital plane is closest to the plane of the Earth's orbit.



In a total eclipse, the disk of the Sun is fully obscured by the Moon. In partial and annular eclipses, only part of the Sun is obscured. Unlike a lunar eclipse, which may be viewed from anywhere on the night side of Earth, a solar eclipse can only be viewed from a relatively small area of the world.

Although total solar eclipses occur somewhere on Earth every 18 months on average, they recur at any given place only once every 360 to 410 years.

The previous total solar eclipse was visible from southern Ohio on June 16, 1806. The next total solar eclipse visible in Ohio will be August 23, 2044.

Gazing at the bright rays from the solar eclipse without protective eyewear can cause serious damage to the retina of the eye, so wearing a pair of safe glasses is important.

Exposure to the sun by taking pictures can damage a camera without precautions and specific extras equipment.

More information is available at your local library and on the internet. Numerous pictures and extensive graphics and diagrams can enhance your understanding and appreciation on the experience.

<https://www.greatamericaneclipse.com>

https://www.exploratorium.edu/eclipse+*TYGJ45



US 2017 Forever issue #5211



Canada 2024 permanent booklet issue #3418

How to Safely View the April 8, 2024, TOTAL SOLAR ECLIPSE

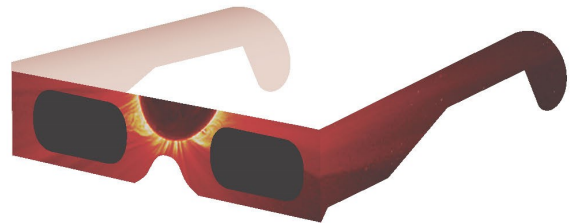
A solar eclipse occurs when the Moon blocks any part of the Sun. On Monday, April 8, 2024, a solar eclipse will be visible in North and Central America, as well as parts of Europe and South America. All 50 U.S. states (excluding most of Alaska) will have a chance to see at least a partial solar eclipse. In a narrow track across Mexico, the U.S. from Texas to Maine, and Canada from Ontario to Newfoundland, the Moon will completely cover the Sun's bright face, producing a spectacular total solar eclipse.



A total solar eclipse is about as bright as a full Moon — and just as safe to look at. But the Sun at any other time is dangerously bright. View it only through special-purpose solar filters that comply with the transmittance requirements of the ISO 12312-2 international standard for filters for direct solar viewing.

Protect Your Eyes

- Looking directly at the Sun without proper eye protection is unsafe EXCEPT during the brief total eclipse phase ("totality"). This happens ONLY within the narrow path of totality. At all other times, it is safe to look directly at the Sun ONLY through special-purpose solar filters, such as "eclipse glasses," that comply with the transmittance requirements of the ISO 12312-2 international standard. Ordinary sunglasses, even very dark ones, are not safe for looking at the Sun.
- If you are inside the path of totality on April 8, 2024, remove your solar filter ONLY when the Moon completely covers the Sun's bright face. As soon as the Sun begins to reappear, replace your solar filter to look at the remaining partial phases.
- Outside the path of totality, there is NO TIME when it is safe to look directly at the Sun without using a solar filter that complies with the transmittance requirements of the ISO 12312-2 international standard.



Instructions for the Safe Use of Solar Filters and Viewers

- Always inspect your solar filter before use; if scratched, punctured, torn, or otherwise damaged, discard it. Read and follow any instructions printed on or packaged with the filter.
- Always supervise children using solar filters.
- If you normally wear eyeglasses, keep them on. Put your eclipse glasses on over them or hold your handheld viewer in front of them.
- Stand still and cover your eyes with your eclipse glasses or solar viewer before looking at the bright Sun. After looking at the Sun, turn away and remove your filter – do not remove it while looking at the Sun.
- Do not look at the uneclipsed or partially eclipsed Sun through an unfiltered camera, telescope, binoculars, or other optical device. Do not do so even while wearing eclipse glasses or using a handheld solar viewer in front of your eyes – the concentrated solar rays could damage the filter and enter your eyes, causing serious injury.
- Solar filters must be securely attached to the front of any telescope, binoculars, or camera lens. Seek expert advice from an astronomer before using a solar filter with a camera, telescope, binoculars, or any other optical device.



What If You Don't Have a Safe Solar Filter or Viewer?

Another method for safe viewing of the partially eclipsed Sun is indirectly via pinhole projection. For example, with your back to the Sun, cross the outstretched, slightly open fingers of one hand over the outstretched, slightly open fingers of the other, creating a waffle pattern. In your hands' shadow on the ground, the spaces between your fingers will show the Sun as crescents.

A solar eclipse is one of nature's grandest spectacles. By following these simple rules, you can safely enjoy the view and be rewarded with memories to last a lifetime. For more information about eye safety and the eclipse, visit <https://eclipse.aas.org/eye-safety>.

This safety information has been endorsed by the American Astronomical Society, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the U.S. National Science Foundation, the American Academy of Ophthalmology, the American Academy of Optometry, and the American Medical Association.



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