

2023 Maximum Partial Obscuration (%)

2024 Maximum Partial Obscuration (%)



The 2023 & 2024 Solar Eclipses through the eyes of NASA

Lunar topography data from NASA's Lunar Reconnaissance Orbiter and the Japan Aerospace Exploration Agency's SELENE lunar orbiter were used to precisely calculate the location of the Moon's shadow for the 2023 and 2024 solar eclipses. The planetary positions are from NASA's Jet Propulsion Laboratory Development Ephemeris 421. Earth imagery from NASA's Blue Marble: Next Generation series were used to create the terrain and Earth at night imagery from NASA's Black Marble were used under the eclipse paths.

2023 Annular Solar Eclipse Saturday, October 14, 2023
2024 Total Solar Eclipse Monday, April 8, 2024

Credits: Michala Gortson and the Scientific Visualization Studio (SVS), in collaboration with the NASA Heliophysics Activation Team (NASA HEAT), part of NASA's Science Activation portfolio. Eclipse calculations by Gene Wright, NASA Goddard Space Flight Center.

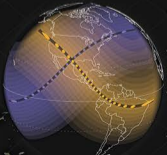
2023 Path of Annularity October 14, 2023

Along a path about 125 miles wide, the Sun will appear as a "ring of fire" in the sky. Annularity lasts up to 5 minutes depending on the viewer's location within this path.

2024 Path of Totality April 8, 2024

Along a path about 115 miles wide, the Moon will completely block the Sun in the sky. Totality lasts up to about 4 minutes and 28 seconds depending on the viewer's location within this path.

Outside of these paths, viewers within the 48 contiguous U.S. states and many other areas will see a partial solar eclipse (in the shaded areas below).



Find More: solar.eclipse.nasa.gov/eclipses