



# The 2023 & 2024 Solar Eclipses through the eyes of NASA

Lunar topography data from NASA's Lunar Reconnaissance Orbiter (LRO) and Earth-based observations of the Moon's surface 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 Earth Observing Satellites used under the eclipse paths.

**2023 Annular Solar Eclipse** - Tuesday, April 8, 2023  
Credit: Michal Górnion and the Scientific Visualization Studio (SVS), in collaboration with the NASA Heliophysics Activation Team (NASA HEAT), Part of NASA's Science Activation Program (NASA SAP), and the Solar System Observations by High-altitude, Wide-Area, Coordinated Experiments Flight Center

**2023 Path of Annularity October 14, 2023**  
Along a path about 125 miles wide, the Sun will be completely blocked for a few minutes. Annularity will last up to 6 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 day. 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 United States will see a partial solar eclipse in the shaded areas below.



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