



Forsyth Astronomical Society

Look Up and Enjoy the Night Sky

April 8, 2024 Solar Eclipse

A total solar eclipse will occur on April 8, 2024. The path of totality will stretch from Texas through Illinois to the Northeast, and Winston-Salem will not be in that path. However, we will see around 85% of the April eclipse. The eclipse will last from 1:56 pm to 4:27 pm, with a peak at 3:13 pm in Winston-Salem.



Credits: NASA/Scientific Visualization Studio/Michala Garrison; eclipse calculations by Ernie Wright, NASA Goddard Space Flight Center.

Eclipse Safety

A lunar eclipse is safe to view at any time. However, **A SOLAR ECLIPSE IS NOT**. It is **NOT** safe to look at the Sun without proper eye protection.

Always view a solar eclipse using reputable (ISO 12312-2 approved) eclipse glasses or viewers. You can also use something like a pin hole camera to cast the shadow of the Sun's image on a surface. **DO NOT** use sunglasses.

Hold the eclipse glasses or viewer close to your eyes – **NOT** at arm's length. **DO NOT** use them with binoculars or a telescope.

If viewing the Sun through a telescope, use a solar telescope or a reputable solar filter that completely and snugly fits over the front of the telescope.

- **DO NOT** use a small filter that fits over the eyepiece.
- **DO NOT** use eclipse glasses or viewers with your telescope.
- **DO NOT** look through your finder unless it also has a full aperture solar filter.
- It is best to remove or cover up your finder. Line up your telescope by looking back at its shadow and **NOT** forward directly at the Sun.



Caution!

Never look directly at the Sun, even for a second! It will damage your eyesight forever!

To view a solar eclipse, use special solar viewing glasses. Get them from a camera store or online.

SUNGLASSES DO NOT WORK, EVEN IF YOU STACK MANY OF THEM TOGETHER.

Credit: NASA

A solar eclipse can be viewed without eclipse glasses, viewers, or solar filters **ONLY DURING TOTALITY**. However, as soon as any light appears you **MUST** immediately use appropriate eye protection as noted above.

Always check your eclipse glasses, viewers, and filters for scratches, cracks, or damage – discard them if you find anything. Pay close attention to all safety information printed on these devices when viewing the Sun.

What is an eclipse?

An eclipse occurs when the moon blocks the sunlight from reaching the Earth (solar eclipse) or when the Earth blocks the sunlight from reaching the Moon (lunar eclipse). Solar eclipses occur because the relative size of the Moon and the Sun are the same, although the Sun is much farther away than the Moon.



In either case, a shadow is cast onto the Earth (solar eclipse) or the Moon (lunar eclipse). Because of the difference in size between the Earth and the Moon, the Earth's shadow during a lunar eclipse will cover the entire Moon, while the Moon's shadow during a solar eclipse will only cover a small area. As such, lunar eclipses are much more common than solar eclipses.



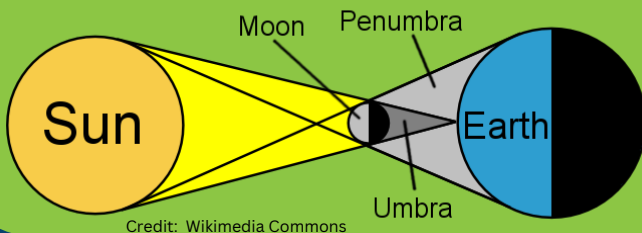
Diagrams

Eclipse Characteristics

Eclipse Shadows

The shadow of an eclipse is split into two areas.

- The **umbra** is the complete shadow and where a total eclipse is visible.
- The **penumbra** is the partial shadow and where only a partial eclipse is visible.



Partial Solar Eclipse

Before or after a total and annular eclipse, and for those not on the path of totality, the Moon will only block a portion of the Sun. This is a partial solar eclipse.



For More Information



FAS37.org



Eclipses (NASA)



2024 Solar Eclipse



Eclipse Safety