

# What is a solar eclipse





## Overview

---

A solar eclipse occurs when the Moon passes between Earth and the Sun, thereby obscuring the view of the Sun from a small part of 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.

The Sun's distance from Earth is about 400 times the Moon's distance, and the Sun's is about 400 times the Moon's diameter. Because these ratios are approximately the same, the Sun and the Moon as seen from Earth.

GeometryThe diagrams to the right show the alignment of the Sun, Moon, and Earth during a solar eclipse. The dark gray region between the Moon and Earth is the , where the Sun is completely obscured by the Moon.

Looking directly at the of the Sun (the bright disk of the Sun itself), even for just a few seconds, can cause permanent to the of the eye, because of the.

A total solar eclipse provides a rare opportunity to observe the (the outer layer of the Sun's atmosphere). Normally this is not visible.

Hybrid eclipseA hybrid eclipse (also called annular/total eclipse) shifts between a total and annular eclipse. At certain points on the surface of Earth, it appears as a total eclipse, whereas at other points it appears as annular. Hybrid eclipses.

A total solar eclipse is a rare event, recurring somewhere on Earth every 18 months on average, yet is estimated to recur at any given location.

Historical eclipses are a very valuable resource for historians, in that they allow a few historical events to be dated precisely, from which other dates and ancient calendars may be.



## What is a solar eclipse

---

### ESS

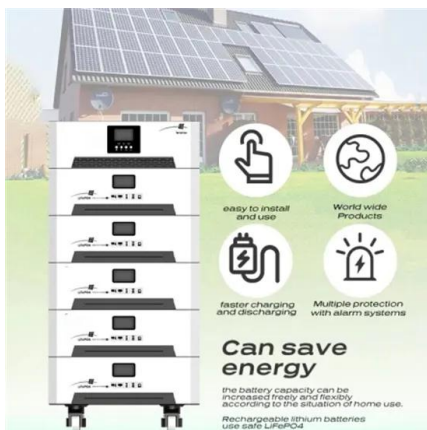


[Eclipse . Definition. 2024 Eclipse Map. History.](#)

Eclipse, in astronomy, complete or partial obscuring of a celestial body by another. From the perspective of a person on Earth, the Sun is eclipsed when the Moon comes between it and Earth, and the Moon is ...

[What Is a solar eclipse? Your questions... , The ...](#)

During a total solar eclipse, areas surrounding the path of totality see a partial eclipse, and even those directly in the path see a partial eclipse as the Moon gradually covers and then moves off of the Sun.



[Eclipse Basics - National Radio Astronomy Observatory](#)

Solar Eclipse A solar eclipse occurs when the Moon moves between the Sun and Earth. The Moon blocks the sunlight from reaching Earth. The Moon's shadow falls onto Earth. Solar eclipses happen every 18 months somewhere on Earth ...

[Understanding the lunar and solar eclipse phenomena ...](#)

Solar eclipses visible from different parts of Earth occur two to five times a year; one total solar eclipse occurs in most years. When Earth is



closest to the Sun and the Moon farthest from Earth, the Moon's silhouette may fall entirely within the ...



## ESA

The eclipse is visible to anybody within this shadow. A solar eclipse can be either total, annular or partial. During a total solar eclipse, the Sun, Moon and Earth are perfectly aligned and the Moon covers the entire disc of the Sun. During an ...

## Solar Eclipses for Beginners

Annular Solar Eclipse and the Path of Annularity  
Annular Solar Eclipses Unfortunately, not every eclipse of the Sun is a total eclipse. Sometimes, the Moon is too small to cover the entire Sun's disk. To understand why, we ...



## [What Is a solar eclipse? Your questions... , The ...](#)

Solar eclipses explained An eclipse is a celestial event that happens when a planet, a moon, and a star line up in a specific way. When the Moon is in the middle of the lineup, you get a solar eclipse. As the Moon ...



### [Solar Eclipse Mini Lessons , MyNASADData](#)

A solar eclipse occurs when the Moon passes between Earth and the Sun, thereby obscuring Earth's view of the Sun, totally or partially. Such an alignment coincides with a new moon, indicating the Moon is closest to the plane of the ...



## Contact Us

---

For catalog requests, pricing, or partnerships, please visit:  
<https://solar360.co.za>