

OUR VIEW FROM EARTH

A COSMIC COINCIDENCE OF SCALE

Earth is the only planet in our solar system from which you can witness a total solar eclipse. This is because the Sun is 400x the Moon's diameter but is also 400x farther away from Earth. As a result, both bodies appear to be the same size in our sky.

But the Moon is slowly inching away from Earth. Hundreds of millions of years from now, the Moon will appear too small to entirely cover the Sun.

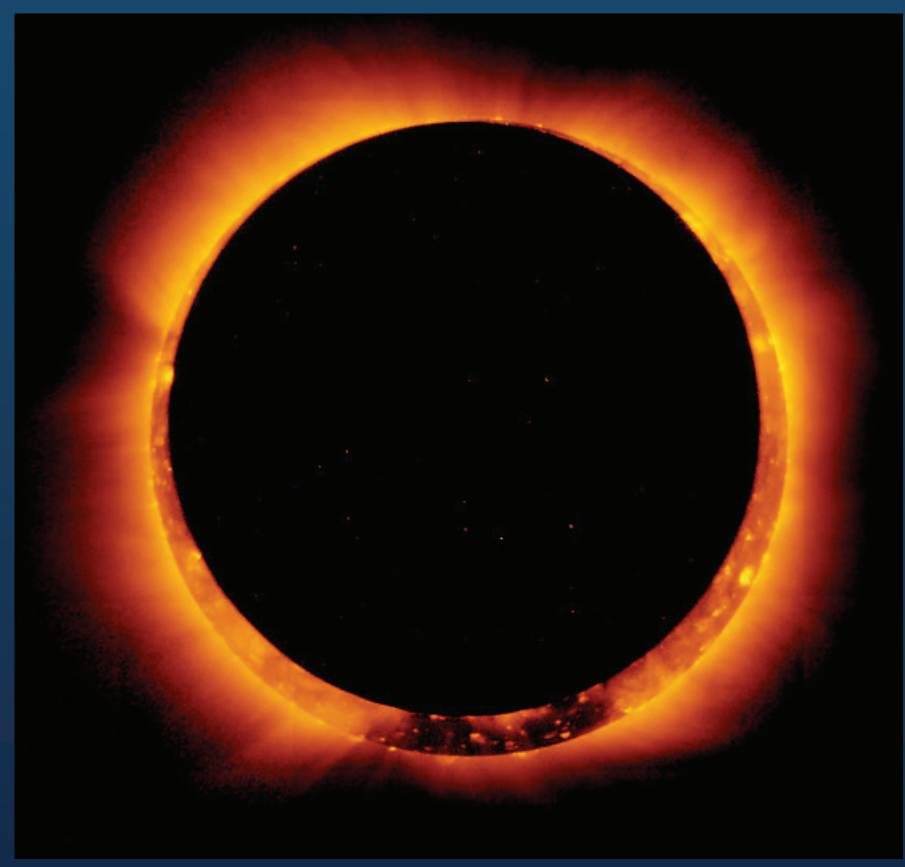
SUN

EARTH

MOON

This drawing shows the true relative sizes of the Sun, Moon, and Earth.

JAXA/NASA/SAO/NAOJ



People in the American Southwest enjoyed a "Ring of Fire" eclipse this past October.

THE MOON KEEPS ITS DISTANCE DURING A 'RING OF FIRE' ECLIPSE

The Moon is farther from the Earth during an annular or "Ring of Fire" eclipse than during a total eclipse. At its closest point, the Moon is about 226,000 miles away. At its farthest point, the Moon is about 251,000 miles away. Objects that are farther away are smaller from our perspective. Thus when the Moon is farther from us, it appears too small to obscure our entire view of the Sun, leaving a circle of light or "Ring of Fire."