A solar eclipse occurs when the Moon passes directly between the Sun and the Earth such that the Moon’s shadow falls on the Earth. The Moon’s diameter is about 1/4 of the Earth’s diameter. The Sun is 400 times bigger than the Moon, but it is 400 times farther away. So, the Sun and the Moon have about the same apparent size! That is why the Moon can block the light from the Sun. The Moon’s orbit is elliptical (not circular), so the distance between the Earth and the Moon varies. For larger distances between the Earth and the Moon, the Moon’s apparent size is smaller than the Sun’s, so an annular eclipse can occur. If the Moon is closer to the Earth, the Moon’s apparent size will be larger than the Sun’s, then a total eclipse can occur. Since the Moon’s orbit is tilted with respect to the Earth’s orbit around the Sun, there are only 2-5 solar eclipses each year. Getting a chance to see a total or annular solar eclipse is rare since the Moon’s shadow on the Earth is very small.

On October 14, 2023, Albuquerque will be in the direct path of an annular eclipse. This eclipse will start at 9:13 AM, with annularity (the peak) at 10:36 AM. During the 4 minutes and 48 seconds of annularity, only a small ring of the sun, sometimes called the ‘Ring of Fire’, will remain visible. The eclipse will end at 12:09 PM.

Safe Viewing of the Sun
It is dangerous to look at the Sun even if it is mostly blocked. Even a small amount of sunlight (about 6%) is enough to damage your eyes! Sunglasses are NOT sufficient protection. Proper protective equipment should be used, eclipse shades/glasses are designed to dim the Sun using special-purpose solar filters. Alternatively, a simple pinhole camera can be used to project an image of the Sun onto a screen.

Join us for a program of free public talks from 8:50 am to noon at the Physics, Astronomy, and Interdisciplinary Science building (PAIS) room 1100. A live image of the Sun will be projected in the room alongside the talks.

8:50AM Welcome - Greg Taylor (UNM)
9:00AM Solar Physics - Stephen White (AFRL)
9:30AM High Energy Views of the Sun - Fred Baganoff (MIT)
10:00AM Solar Eclipses Optical and Radio - Greg Taylor (UNM)
11:00AM History of Eclipses - Kylar Greene (UNM)
11:30AM Eclipses on Other Worlds - Mallory Harris (UNM)

For more information, please visit: eclipse.unm.edu

Kindly support our goal of a new Campus Observatory for UNM. To help, please scan the QR code below.
What is happening on the Field?

1. Learn how to photograph solar eclipses safely and effectively.
2. National Oceanic and Atmospheric Administration (NOAA) Information.
3. Physics demonstrations by the Society of Physics Students.
4. Watch a live, 360-degree view of the eclipse as seen from a high-altitude weather balloon.
5. Find out what scientists can learn about the Sun and the Earth’s atmosphere during solar eclipses.
6. See the different colors and components of light through diffraction and polarization demos.
7. Experience the eclipse with your ears, hands and through movement.
8. View the eclipse safely through a solar film screen.

Eclipse Observation Area

Nationwide Eclipse Ballooning Project

First Aid
Solar Film Tent

7. Feel & Hear the Eclipse

5 + 6. The Science of Eclipses
2 + 3. Physics Demos

2. NOAA

Support the New Observatory

“Pinhole Cameras”

Eclipse Viewers

Eclipse Viewers

Main Entrance

Food truck
Food truck
Food truck
Food truck

Redondo Dr NE
Redondo Ct NE
Redondo Ct N
Redondo Ct NE