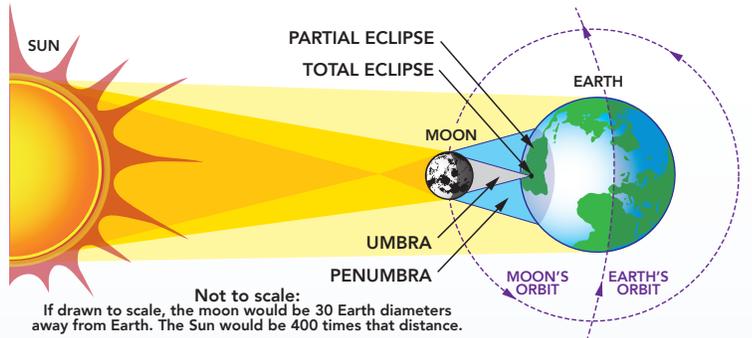




# EXPERIENCE THE 2020 Eclipse in South America MONDAY • DECEMBER 14, 2020



## TOTAL SOLAR ECLIPSE: Monday • December 14, 2020



In this series of stills from 2013, the eclipse sequence runs from right to left. The center image shows totality; on either side are the 2nd contact (right) and 3rd contact (left) diamond rings that mark the beginning and end of totality respectively.



### WHAT IS A SOLAR ECLIPSE?

A solar eclipse happens when the moon casts a shadow on Earth, fully or partially blocking the Sun's light in some areas.

Observers within the path of totality will be able to see the Sun's corona (weather permitting), like in the images above and left. Observers outside this path will see a partial eclipse.

### THE NEXT ECLIPSE

After the 2020 solar eclipse, the next total solar eclipse visible over South America will be on **Saturday, December 4, 2021.**



### WHERE TO WATCH

Find a nice, clear spot with a good view of the sky.



### HOW TO WATCH

You can see the Sun and the eclipse with special eclipse glasses. **NEVER** look directly at the Sun without appropriate eyewear. Regular sunglasses are not safe to view the eclipse. More: <https://go.nasa.gov/2HUkbQ6>



### HOW LONG WILL IT LAST

The total eclipse, when the Sun is completely blocked by the moon, will last up to 2 minutes and 40 seconds, depending on your location.



This photo taken from the International Space Station shows the moon's umbral, or inner, shadow during the total solar eclipse of March 29, 2006.



This map shows the path of the moon's umbral shadow—in which the Sun will be completely obscured by the moon—during the total solar eclipse of December 14, 2020. The lunar shadow enters South America near Saavedra, Chile, just before 11:38 a.m. CLST. Totality begins in Saavedra, Chile, at 1:00 p.m. CLST. The total eclipse will end in Salina del Eje, Argentina, at 1:25 p.m. ART. Outside this path, a partial solar eclipse will be visible in much of South America.

# SAFELY observing THE SUN

**WARNING!** Never look directly at the Sun without proper eye protection. You can ***seriously*** injure your eyes.



Check with local science museums, schools and astronomy clubs for eclipse glasses—or purchase an ISO 12312-2 compliant pair of these special shades! Always inspect your solar filter before use. If scratched or damaged, discard it.



View the eclipse with special eclipse glasses.



Regular sunglasses are not safe to view the eclipse.

## SUN FUNNEL



Inexpensive and easy to build, the Sun funnel is a device that completely encloses the light coming from a telescope and projects a magnified image of the Sun, large enough for many people to view at once.  
<https://go.nasa.gov/3kEpe10>

## STELLAR SHADOWS!



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Sunlight from a partial eclipse funnels through tree leaves to project images of crescents on the ground.

## ECLIPSE DETAILS FOR CITIES IN THE PATH OF TOTALITY

	Eclipse Begins	Totality Begins	Totality Ends	Eclipse Ends	Time Zone
Teodoro Schmidt, Chile	11:39 a.m.	1:00 p.m.	1:02 p.m.	2:29 p.m.	CLST
Temuco, Chile	11:39 a.m.	1:02 p.m.	1:02 p.m.	2:30 p.m.	CLST
Gorbea, Chile	11:40 a.m.	1:01 p.m.	1:03 p.m.	2:30 p.m.	CLST
Villarrica, Chile	11:41 a.m.	1:02 p.m.	1:04 p.m.	2:31 p.m.	CLST
Pucón, Chile	11:41 a.m.	1:03 p.m.	1:05 p.m.	2:31 p.m.	CLST
Junín de los Andes, Argentina	11:43 a.m.	1:06 p.m.	1:07 p.m.	2:33 p.m.	ART
Ministre Ramos Mexía, Argentina	11:50 a.m.	1:13 p.m.	1:16 p.m.	2:41 p.m.	ART
Valcheta, Argentina	11:52 a.m.	1:16 p.m.	1:18 p.m.	2:43 p.m.	ART
San Antonio Oeste, Argentina	11:55 a.m.	1:19 p.m.	1:20 p.m.	2:46 p.m.	ART

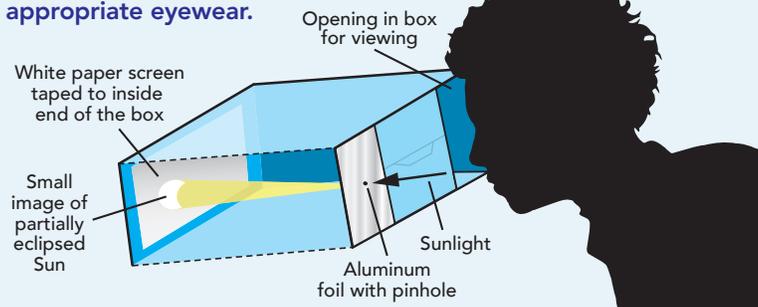
Seconds may vary depending on your location. View the interactive map for more information:  
<https://go.nasa.gov/3eVbb9k>

## MAKE YOUR OWN ECLIPSE PROJECTOR

You can make this simple eclipse projector with almost any cardboard box, paper, tape and foil.

The longer the distance from the pinhole to screen, the larger the image of the Sun will be.

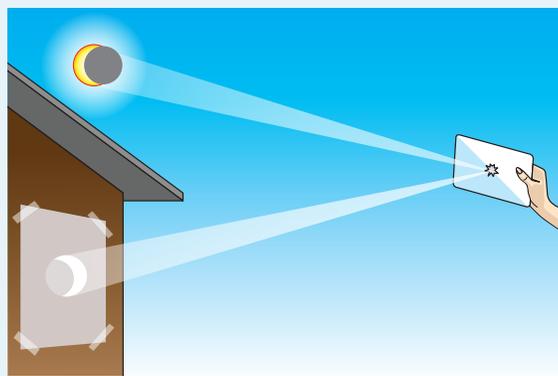
**NEVER** look directly at the Sun without appropriate eyewear.



## MIRROR IN AN ENVELOPE

Slide a mirror into an envelope with a ragged hole about 5/8 inch (1.5 cm) cut into the front. Point the mirror toward the Sun so that an image is reflected onto a screen about 15 feet (5 meters) away. The longer the distance, the larger the image.

**DO NOT LOOK AT THE MIRROR, ONLY AT THE SCREEN.**



**ECLIPSES IN THE UNITED STATES:** The next solar eclipses in the United States are on Saturday, October 14, 2023 (Annular Solar Eclipse) and Monday, April 8, 2024 (Total Solar Eclipse).