Annular solar eclipse, 6 February 2027: who sees it and how to look safely

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The 6 February 2027 ring eclipse crosses Chile, Argentina and the Atlantic to West Africa. No part of the US sees it. Who does, and NASA's safety rules.

On Saturday 6 February 2027 the Moon passes in front of the Sun, but it is too far from Earth to cover it completely, so for people on a narrow path the Sun becomes a bright ring. That path starts in southern Chile, crosses Argentina, runs out over the South Atlantic and ends near sunset on the coast of West Africa. No part of the United States sees it, not even a partial eclipse. Wherever you are, never look at the Sun: for an eclipse, NASA says to use eclipse glasses or a handheld solar viewer that meets the ISO 12312-2 standard. Our guide Never look at the Sun is the version for children.

Why a ring and not a total eclipse

The Moon's path around Earth is an oval. When the Moon is near its far point, its disc looks slightly smaller than the Sun's, so even when it lines up exactly it leaves a thin ring of Sun showing all round. That is an annular eclipse; "annulus" is Latin for a little ring. Peabody's sky table has the Moon new on 6 February 2027 about 402,700 km from Earth, out near the far end of its oval, which is why this one is a ring.

At its greatest, a little before 16:00 UTC, astronomy-engine finds the Moon covering about 86% of the Sun's disc, over the South Atlantic off the coast of Brazil.

Who sees what

These numbers are our own, from astronomy-engine, and are rounded; NASA's eclipse pages have the official maps.

The ring. A narrow strip through southern Chile and Argentina, around 40 to 45° south, in the middle of the day; then over the ocean; then, late in the afternoon, Côte d'Ivoire and Ghana, where the ring sits low in the west close to sunset. In Abidjan it is about eight degrees up at its peak; in Accra about four; in Lagos it touches the horizon.

A partial eclipse, a bite out of the Sun, for much of South America:

- City: Montevideo · Share of the Sun covered at its peak: about 86%
- City: Rio de Janeiro · Share of the Sun covered at its peak: about 84%
- City: Buenos Aires · Share of the Sun covered at its peak: about 82%
- City: São Paulo · Share of the Sun covered at its peak: about 78%
- City: Santiago · Share of the Sun covered at its peak: about 62%

- City: Lima · Share of the Sun covered at its peak: about 2%

Dakar in Senegal gets about 43%, low in the west in the late afternoon.

Nothing at all from anywhere we checked in the United States: New York, Miami, Denver, Los Angeles, Anchorage, Honolulu, Puerto Rico, the US Virgin Islands, Guam and American Samoa. For the US mainland cities we tried, astronomy-engine's next solar eclipse of any kind is on 26 January 2028.

How to look safely, as NASA says it

This part is NASA's guidance, not ours. We make no safety claim of our own; follow NASA's eclipse safety page.

- Never look at the Sun with bare eyes, sunglasses, binoculars, a camera or a telescope.
- During an annular eclipse, the Sun is never fully covered, so NASA says to keep eclipse glasses or a handheld solar viewer that meets the ISO 12312-2 international standard on for the whole eclipse, including the ring.
- Check them for scratches or damage before use, as NASA's page describes.
- A grown-up goes too, and keeps binoculars and telescopes away from the Sun.

Our guide also describes a pinhole projector, a card with a small hole that throws a tiny picture of the Sun onto a second card while you stand with your back to the Sun. During an eclipse, the bite shows in the little image.

What US families can do instead

Watch it on a screen: photos and video from the path are the only way to see this one from the United States. On the same day, Peabody's table has the Moon new, so the evenings either side are dark: a good week for stars, and Mars is near its brightest around its opposition in February.

Three questions grown-ups ask

Is a ring eclipse less dangerous than a total one? NASA treats it as needing protection the whole time, because some of the Sun always shows. Follow their page, not a rule of thumb.

Why don't we get an eclipse every new Moon? The Moon's orbit is tilted about 5° to Earth's, so most months the new Moon passes just above or below the Sun.

When is the next one we can see? For the US mainland cities we checked, 26 January 2028, a partial. We'll write about it closer to the date.

Peabody (peabody.kids) is free through the end of 2026, with no ads and no sign-up. The library has stories at your child's reading level, and the sky safety quiz is ten questions on the rules.

Sources

- NASA, eclipses and eclipse safety: the safety guidance, quoted as NASA's.
- Who sees the ring and how much of the Sun is covered: our own calculation with astronomy-engine (MIT license), SearchGlobalSolarEclipse and SearchLocalSolarEclipse, run 30 October 2026.
- The new Moon's distance: Peabody's sky table, from the same library.

Free at peabody.kids/blog/annular-solar-eclipse-february-2027