Solar eclipse 2027: the 2 August path of totality, and February's ring

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Two solar eclipses in 2027, a ring on 6 February and a total eclipse on 2 August from Spain to Egypt. Who sees each, what 27 cities get, and NASA's safety rules.

There are two solar eclipses in 2027. On 6 February an annular eclipse turns the Sun into a thin ring along a path across southern Chile and Argentina, the South Atlantic and the coast of West Africa. On 2 August a total eclipse covers the Sun completely along a path from the Atlantic through southern Spain, Morocco and North Africa to Egypt, with greatest eclipse near Luxor, and on to end over the Indian Ocean. No city in the United States sees either one, not even a partial eclipse, and that includes Puerto Rico, Hawaii and Alaska. For both, NASA says to look only through eclipse glasses or a handheld solar viewer that meets the ISO 12312-2 standard. Peabody's Eclipse center has maps of both paths, what 27 cities see, and a pinhole viewer to print.

The big one: 2 August 2027

On Monday 2 August 2027 the Moon passes exactly between Earth and the Sun and, for people on a narrow strip, covers the Sun completely. The day goes dim, the brightest stars and planets come out, and the Sun's thin outer glow, the corona, shows around a black disc. Everywhere else for a long way on either side, people see a partial eclipse: a bite out of the Sun.

Greatest eclipse, the moment the Moon's shadow is most centred on Earth, is at about 10:06 UTC, near 25.5° N, 33.2° E. That is in southern Egypt, near Luxor. The page for the day, Total solar eclipse, August 2027, has the countdown.

Who sees totality on 2 August

Peabody's table follows 27 cities. Of those, three are inside the path of totality:

- Málaga, Spain: total, peak at about 08:48 UTC, with the Sun about 39° up in the morning sky.
- Tangier, Morocco: total, peak at about 08:47 UTC, the Sun about 38° up.
- Luxor, Egypt: total, peak at about 10:05 UTC, with the Sun about 82° up, nearly overhead.

Near the path, many cities get a deep partial eclipse. A deep partial is not the same as totality: even with a sliver of Sun left, the day stays bright and the glasses stay on.

- Seville: about 98% of the Sun covered.

- Tunis: about 97%.
- Cairo: about 95%.
- Lisbon: about 92%.
- Madrid: about 86%.
- London: about 42%.

Farther south, in West Africa, it is barely a nibble: Accra and Lagos get 1 or 2%. In the Americas, nothing.

The ring: 6 February 2027

Six months earlier, on Saturday 6 February 2027, the Moon passes in front of the Sun again, but it is a little farther from Earth and looks a little smaller, so it can't cover the Sun completely. Along the path, the Sun becomes a bright ring. That's an annular eclipse, sometimes called a ring of fire.

The path starts over the Pacific, crosses southern Chile and Argentina, runs out over the South Atlantic, where greatest eclipse is at about 15:59 UTC, and ends near sunset in Côte d'Ivoire and Ghana. In Abidjan and Accra, the Sun is very low when the ring comes, about 8° and 4° up, so a clear view of the western horizon matters. Farther from the path, Montevideo gets about 86% covered, Rio de Janeiro about 84%, Buenos Aires about 82% and Santiago about 62%. Our post on the annular solar eclipse of February 2027 has the whole story, and the event page, Annular solar eclipse, February 2027, has the countdown.

Eclipse safety, in NASA's words

Peabody doesn't make safety rules of its own; this is NASA's guidance. NASA says to look at the Sun during an eclipse only through safe solar viewing glasses (eclipse glasses) or a handheld solar viewer that meets the ISO 12312-2 international standard. Ordinary sunglasses are not safe. NASA says the only time it is safe to look without them is during totality, the brief time when the Moon covers the Sun completely, and that the glasses go back on as soon as the Sun starts to reappear. In a partial or an annular eclipse, there is no such moment. NASA's full page is Eclipse safety.

A pinhole viewer is a way to watch without looking at the Sun at all: you stand with your back to it and watch a small image of the Sun land on paper. The Eclipse center has one to print, and our children's guide Never look at the Sun explains why in their words.

If you're in the US

Neither 2027 solar eclipse reaches the United States. What you can do: follow along on the Eclipse center maps, watch a live stream on the day, and talk through why the shadow lands where it does. There are also three lunar eclipses in 2027, on 20 February, 18 July and 17 August, but all three are penumbral, the faint kind where the Moon only dims a little and most

people can't tell anything is happening. The 17 August one happens while the Moon is up for every US city in our table, so it makes a good excuse to look at the Moon, but expect it to look almost ordinary.

Three questions grown-ups ask

Is it worth travelling for 2 August? That's a family decision; nobody can promise a clear sky. What we can say from the table: totality is on a narrow path, and a city at 95 or 98% is not the same experience. If you go, aim for a place inside the path, not near it.

What will a child actually notice in a partial eclipse? Through eclipse glasses, a bite out of the Sun that grows and then shrinks. Without them, at 42% like London, maybe nothing. Pinhole images, and the little crescents of light under a leafy tree, are the easy part to see together.

Can we look at the ring in February without glasses, since it's so thin? No. In an annular eclipse the Sun is never fully covered, and NASA's guidance is to use eclipse glasses or a solar viewer the whole time.

Peabody (peabody.kids) is free through the end of 2026, with no ads and no sign-up, and nothing your child taps on the space pages is sent anywhere. For a cloudy day, the library has stories at your child's reading level.

Sources

- Eclipse paths, times and the city table from Peabody's eclipse data, worked out with astronomy-engine; coastlines from Natural Earth.
- NASA, eclipse safety: eclipse glasses, ISO 12312-2 and when it is safe to look.
- NASA, eclipses: what annular, total and partial eclipses are.

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