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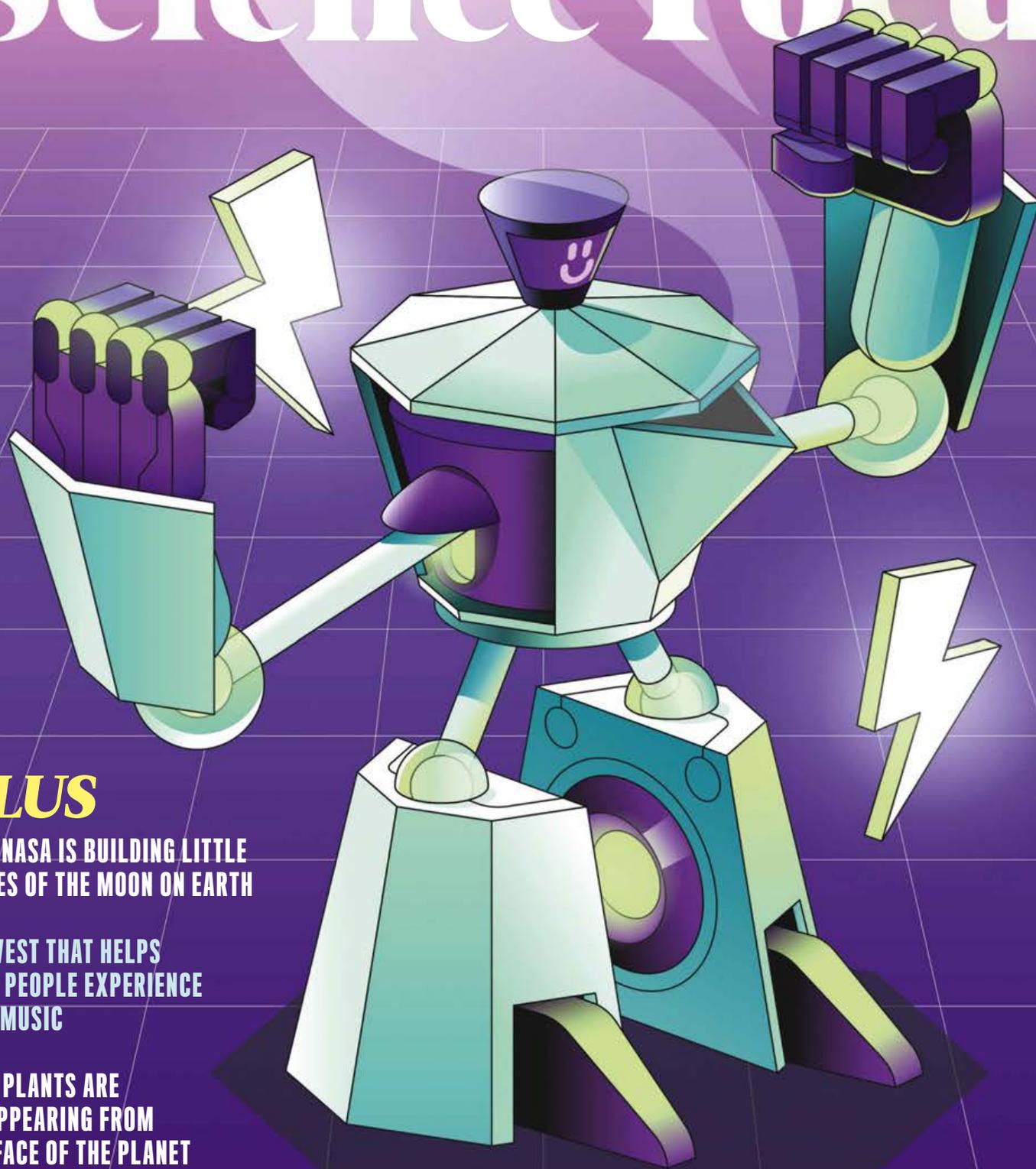
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THE BURNING 'RING OF FIRE' ECLIPSE... THAT WENT DOWN, DOWN, DOWN THE AMERICAS

The burning ring produced by the Sun and Moon crossing paths won't be seen again in the US until 2039

On 14 October 2023, a spectacular annular eclipse cut across parts of North, Central and South America. Millions of people watched the 'ring of fire' as it burned across the sky.

The ring travelled over eight US states, Mexico and Panama, then crossed into Brazil before heading out over the Atlantic Ocean. The whole event took place over 2.5 hours, with the annular eclipse lasting only 4-5 minutes in the middle of the astronomical phenomenon.

An annular eclipse occurs when the Moon passes in front of the Sun, but when the Moon's elliptical orbit hasn't brought it close enough to Earth to completely block out the star. As a result, a small fiery halo of sunlight, known as the 'annulus', remains visible.

Annular solar eclipses are uncommon: the next one in the US won't occur until 2039 and will only be visible in parts of Alaska. The next European annular eclipse will take place in 2028, but the UK will only see a partial eclipse.

As well as teaching astrophysicists about the Sun, solar eclipses have also helped to prove Einstein's theory of General Relativity. The striking natural phenomenon also allows scientists to study the ionosphere (the upper part of our atmosphere) and how it affects communications and space weather.



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1. The 'Ring of Fire' effect caused during the annular solar eclipse, as seen from Penonome, Panama. Here, the Moon is directly in front of the Sun. At the maximum of the eclipse, the Moon covered approximately 70 per cent of the Sun's disc.

2. NASA's Earth Polychromatic Imaging Camera (EPIC) captures the annular eclipse from space as the Moon casts a shadow over America and Mexico. EPIC's viewpoint lies about 1.5 million kilometers away from Earth, aboard the Deep Space Climate

Observatory (DSCOVR) satellite, which monitors space weather. There were limited viewing points from Earth: at its widest point, the path of annularity measured 220km (137 miles), while at its narrowest was 190km (118 miles) wide.

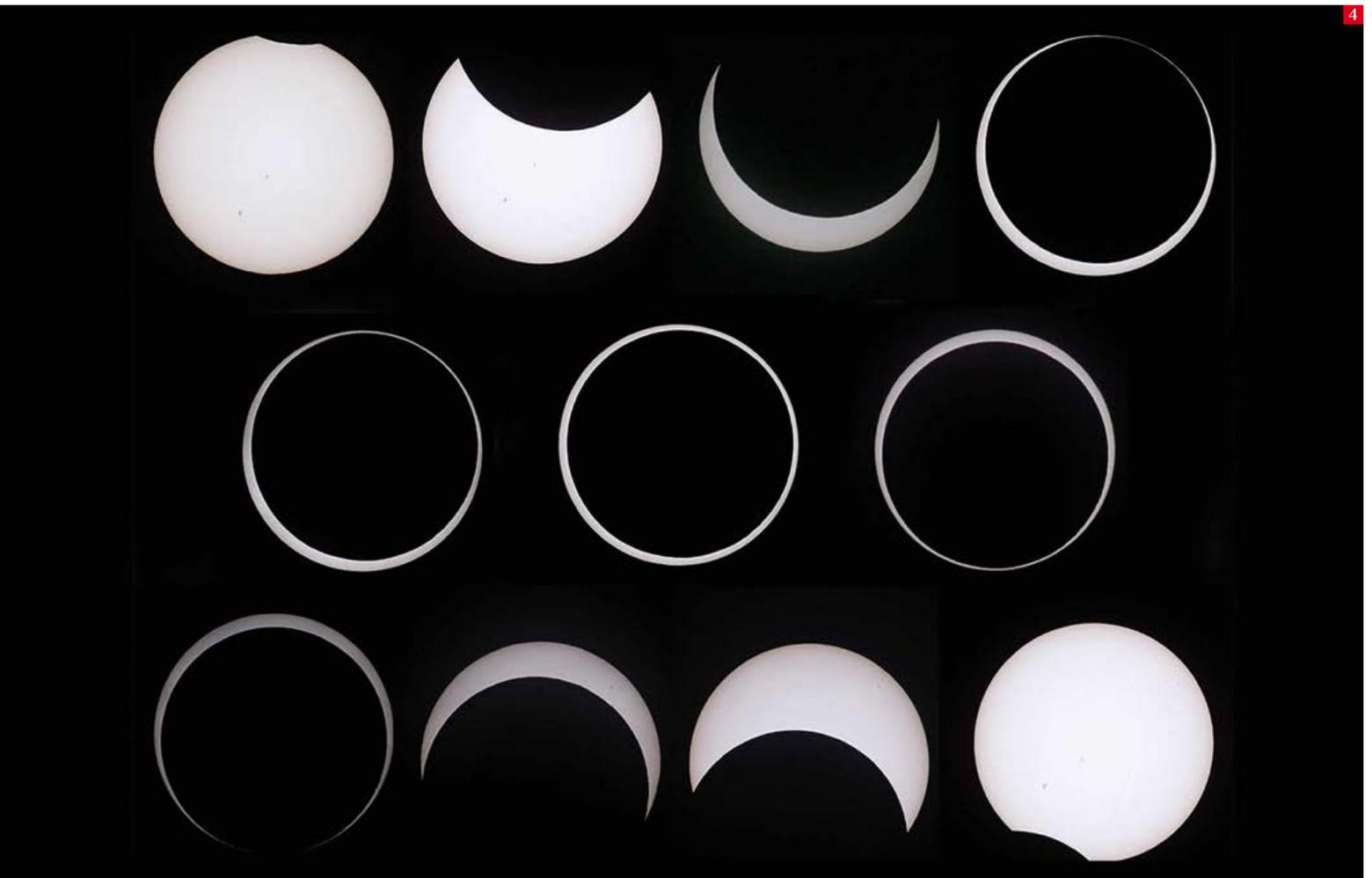
3. People watch the annular solar eclipse at the Luis Enrique Erro Planetarium of the National Polytechnic Institute in Mexico City. Though they're bathed in the shadow cast by the Moon, special, purpose-made eclipse glasses are still needed to

protect their eyes from the Sun's light – even though the Moon is obscuring all but a thin sliver of it. Solar retinopathy can occur when intense light energy (in this case, from the Sun) damages the cells in the retina.

4. A compilation of photographs shows the progress of the annular solar eclipse on 14 October 2023 as it passed over Capitol Reef National Park, Utah, USA.



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