

# New Scientist

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SPECIAL ISSUE

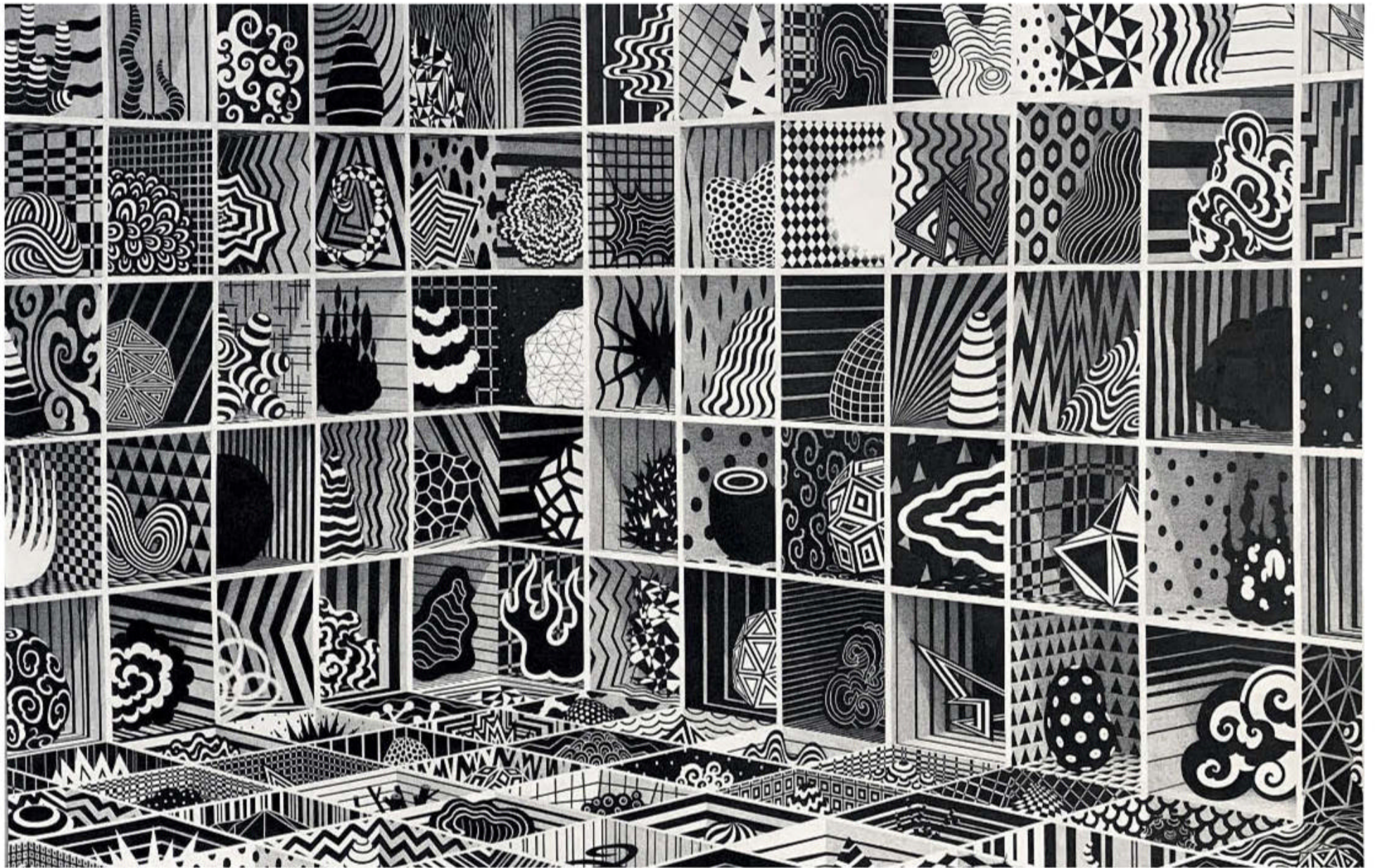
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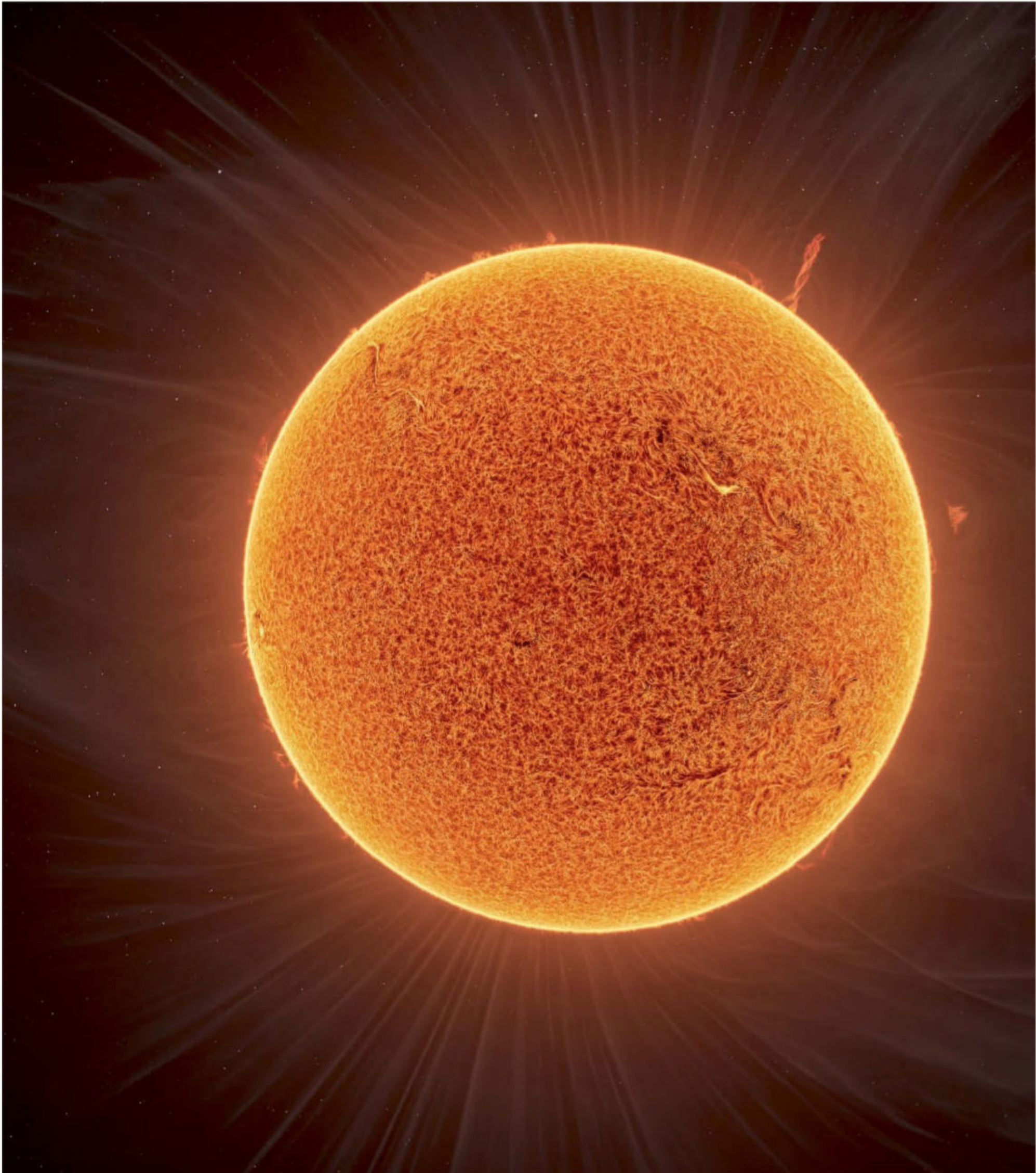
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## Solar power



Photographers **Jason Guenzel and Andrew McCarthy**

NEVER has the sun been seen in quite this way. This dazzlingly detailed shot of our star was recently created in the aftermath of a solar tornado of record proportions that was whipping up the sun's atmosphere. Titled *Fusion of Helios* (main image), it is the result of a painstaking five-day collaboration between astrophotographers Jason Guenzel and Andrew McCarthy, who are "always looking for fresh and creative ways to present views of the universe", says Guenzel.

On 14 March, churning plasma at the sun's surface, caused by the rotation of its magnetic fields, resulted in a "tornado" forming at its north pole. This grew into a protruding filament "14 Earths tall", according to McCarthy, or 178,000 kilometres – the tallest solar tornado ever recorded (shown top right). The blistering event lasted three days before exploding into a cloud of plasma that was ejected into space.

The pair combined more than 90,000 separate photos of the sun taken by McCarthy with a high-speed camera during this colossal event, as well as a 2017 shot by Guenzel of the sun's outer layer, or corona, visible during a total solar eclipse. Guenzel says it is the "most detailed and dynamic" image of the sun he and McCarthy have ever produced, in what was an "astounding" result. The bottom-right image is a further close-up of the main picture.

"Solar photography is an exercise in discipline, perseverance and even some luck," says Guenzel. "By combining our talents, we were able to blend art and science, creating a wonderfully unique composite view of the sun." ■

**Gege Li**