Tiny Explosions Pack a Mighty Punch

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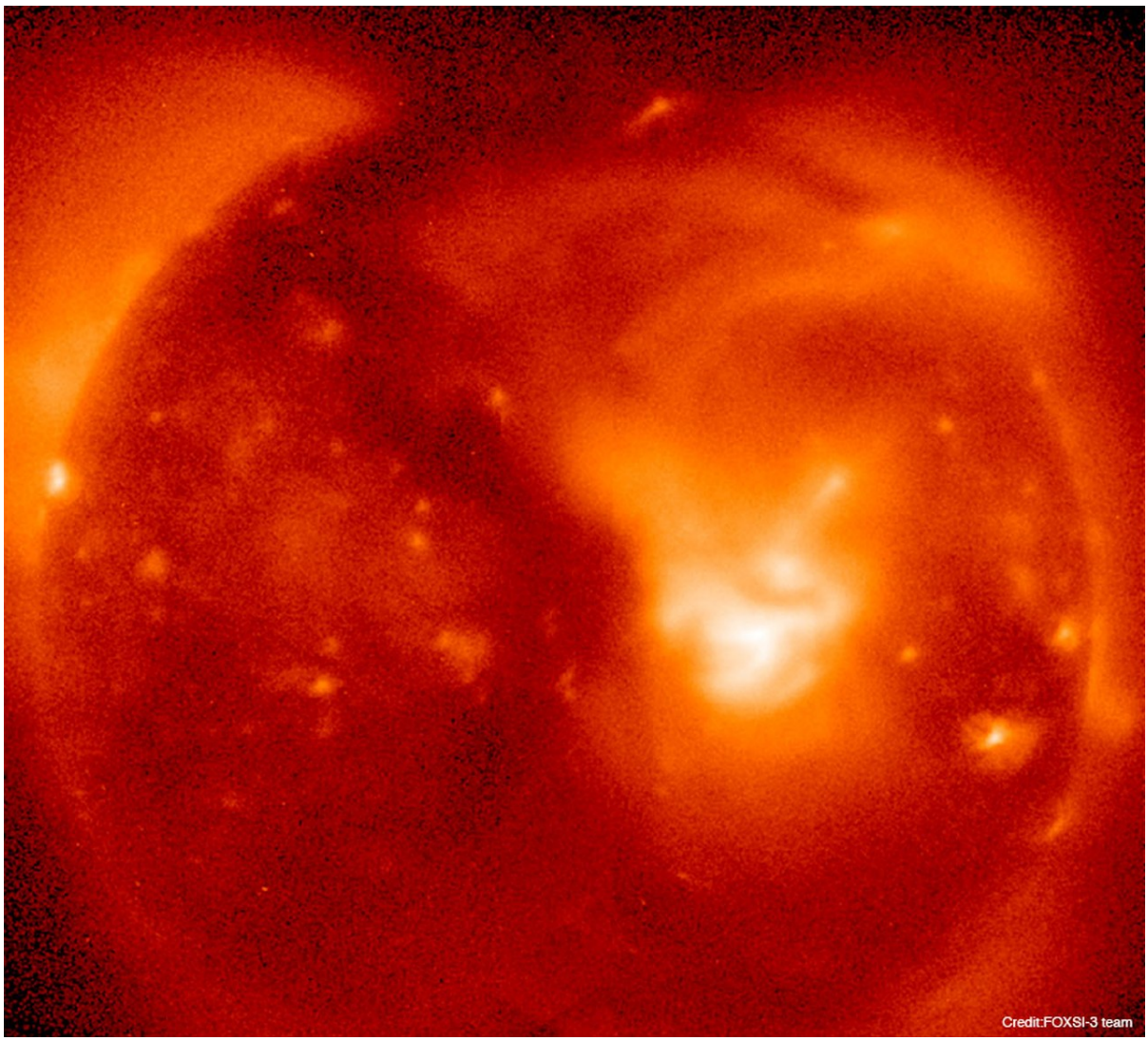

The Sun tells its story in layers of light, each layer reveals what's happening at different temperatures. For example, the sunlight that we see is mostly from the Sun's surface, which is about 6,000 degrees Celsius.

But there's much more going on outside the bounds of our vision. X-ray light reveals the hottest and most exciting events happening on the Sun. You may have heard of solar flares but have you heard of nanoflares?

Nanoflares are small but powerful eruptions that take place all the time, in the blanket of gases (atmosphere) surrounding the Sun.

The explosions send particles from the surface of the Sun flying into space at crazy speeds. According to some scientists, they're responsible for heating the Sun's atmosphere to an insane one million degrees Celsius!

Studying nanoflares requires X-ray vision and scientists around the world have been working hard to develop the best tool for the job. The end result is a small, but very smart, research rocket called FOXSI (pronounced fox-y).

FOXSI is designed to take short trips above Earth's atmosphere for a peek at space before falling back to the ground.

Last year, the little rocket travelled 300km above the Earth for six minutes, to stare directly at the Sun. During its trip it took the clearest pictures of the Sun's scorching halo we've ever seen – including this one!

Scientists are checking these new X-ray photographs as we speak to see how they can help our search for nanoflares.

COOL FACT

"Nano" normally means something is "very small". Even though a typical nanoflare is smaller than a normal solar flare, it has the same energy as 240 megatons of TNT. That's like 10,000 atomic bombs detonating at once!

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