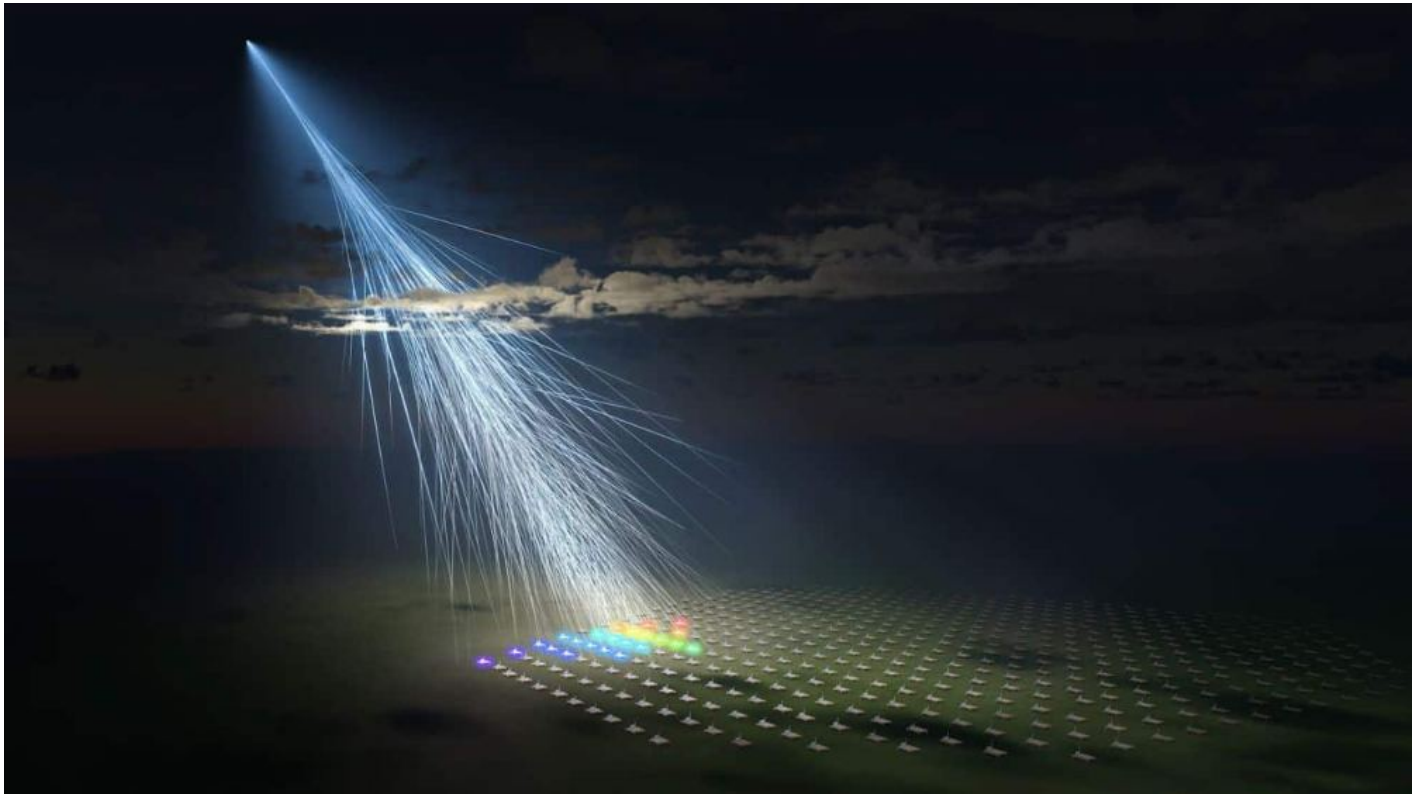


What is Amaterasu?

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About Amaterasu

- It is one of the highest-energy cosmic rays ever detected.
- It has been named Amaterasu after the Japanese sun goddess.
- It has an energy exceeding 240 exa-electron volts (EeV). That is millions of times more than particles produced in the Large Hadron Collider, the most powerful accelerator ever built, and equivalent to the energy of a golf ball travelling at 95mph.
- It comes only second to the Oh-My-God particle, another ultra-high-energy cosmic ray that came in at 320 EeV, detected in 1991.
- Amaterasu appears to have emerged from the Local Void, an empty area of space bordering the Milky Way galaxy.

What are Cosmic Rays?

- They are echoes of violent celestial events that have stripped matter of its subatomic structures and hurled it through the universe at nearly the speed of light.
- Essentially, cosmic rays are charged particles with a wide range of energies consisting of positive protons, negative electrons, or entire atomic nuclei that travel through space and rain down onto Earth nearly

constantly.

- They hit Earth's upper atmosphere and blast apart the nucleus of oxygen and nitrogen gas, generating many secondary particles.
 - These travel a short distance in the atmosphere and repeat the process, building a shower of billions of secondary particles that scatter to the surface.
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Q1) What is the speed of light?

Light moves at an incredible 186,000 miles per second (300,000 kilometers per second), equivalent to almost 700 million mph (more than 1 billion km/h). That's fast enough to circumnavigate the globe 7.5 times in one second.

Source: [High-energy 'sun goddess' particle 'from nowhere' collides into Earth](#)

Source: <https://vajiramandravi.com/current-affairs/amaterasu/>

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