

New Discovery of the High-Energy Particle Amaterasu (Cidtonium) and Theoretical Derivation of Its Frequency, Mass, Energy, Speed, etc., in the Universe 2026

A) Discovery of the Particle by the Utah Detector: Its Origin and the Mechanism Underlying Such Energy

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1. Where did the Amaterasu particle come from [1]?

Given that these particles are fundamental particles possessing a large amount of energy, they should be sought in the disintegration of stars, in white holes, or in the Big Bang explosion, since it is in these events that extremely large quantities of energy are said to be released; and as a result of this high intensity and energy, the probability of the emission and output of fundamental particles is high, since more fundamental particles are released in violent explosions.

2. How did the Amaterasu particle acquire such an enormous amount of energy [2]?

Consider a gun that holds various types of bullets made of plastic, aluminium, lead and gold. Whenever this weapon is fired, the least effective bullet is undoubtedly the plastic one, and the most effective is the gold one, because the density of plastic is far lower than that of gold; indeed, it is not the dimensions of the bullets that affect their impact, but rather the density that has the effect. Thus, the greater the density, the greater the impact. It may therefore be concluded that the density of the discovered Amaterasu particle is greater than that of the proton, and, given the amount of energy received, it may be concluded that its speed is also greater than the speed of the photon.

3. What exactly was the primary particle [3]?

Given this particular density of the particle and its high energy, this particle may be the primary particle of photons, which is termed the sub-photon — that which exists within the photon and constitutes a smaller part of it.

References:

[1] Unger, Michael, and Glennys R. Farrar. "Where did the amaterasu particle come from?." *The Astrophysical Journal Letters* 962.1 (2024): L5.

[2] "Second Highest-Energy Cosmic Ray Ever." College of Science, University of Utah, 21 Nov. 2023, science.utah.edu/faculty/faculty-research/cosmic-ray/. Accessed 28 Aug. 2026.



[3] “Cosmic Investigations: Where Does the Cosmic Particle with the Second-Highest Energy Ever Measured Come From?” Max-Planck-Gesellschaft, 6 Feb. 2026, www.mpg.de/26102988/cosmic-investigations-tracing-the-origin-of-the-astrophysical-particle-amaterasu. Accessed 28 Aug. 2026

