

News & Comments

A Dead Star Devours an Entire Solar System in Cosmic Cannibalism

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What happens to the planets of a dying star? The planets are presently being torn apart and eaten by that star if it is a certain white dwarf 86 light-years away

When a star dies, it leaves behind a white dwarf which draws debris from both its inner and outer reaches, disrupting an entire planetary system. Scientists have never seen anything like this before. White dwarf stars consume rock-metallic and icy materials, which are the essential components of planets.

Researchers used Hubble Space Telescope data and other NASA observatories to diagnose this case of cosmic cannibalism. Researchers used the atmospheric material captured by white dwarf star G238-44 to make their findings. Upon exhausting most of its fuel, a star like our sun forms a white dwarf. White dwarfs typically have large sizes and are relatively dense.

The transition from a red giant star to a white dwarf is described as a chaotic process in current planetary system evolution theories. A new study confirms the violent and chaotic nature of this phase and shows that stars can capture and consume material from asteroid belts and Kuiper belts within 100 million years after beginning their white dwarf phases. According to this research, the white dwarf may consume no more mass than an asteroid or small moon.

The research findings are also intriguing because such icy objects are credited with "irrigating" dry rocky planets in the solar system. Comets and asteroids like these are believed to have delivered water to Earth billions of years ago, thereby creating the conditions necessary for life on Earth.

Scientists can observe what this white dwarf was made of when it was first formed around this star thanks to its cannibalism. Nitrogen, oxygen, silicon, iron, and magnesium were found by the research team. About 5 billion years from now, researchers are considering the ultimate scenario for the evolution of the sun. The Earth and the other inner planets could be vaporized together. Many asteroids will fall into the sun as their orbits are perturbed by Jupiter's gravity.

KEYWORDS

Star System, Planet, European Space Agency, Other Space, University Of California, Astronomy, Astrophysics, Hubble Space Telescope, UCLA

