

Rare isotope probes of thermonuclear astrophysical explosions

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What is the origin of the radioactive aluminum-26 observed across the Milky Way? Has stardust from classical novae really been found in primitive meteorites? What conditions are needed to trigger thermonuclear explosions on accreting neutron stars? The beta decays of the most neutron deficient bound isotopes of phosphorus, chlorine, and magnesium, respectively, are being used to shed light on these three mysteries.