

Abstract Submitted
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Is Deuterium Nuclear Fusion Catalyzed by Antineutrinos? ISAAC SHOMER — The hypothesis of Fischbach and Jenkins that neutrinos emitted from the sun accelerate radioactive decay is noted. It is thought that neutrinos accelerate beta decay by reacting with neutron-rich nuclides to form a beta particle and a daughter product, with no antineutrino emitted. Conversely, it is proposed that antineutrinos can react with proton-rich nuclides to cause positron decay, with no neutrino emitted. It is also proposed that the nuclear fusion of the hydrogen bomb is triggered not only by the energy of the igniting fission bomb, but by the antineutrinos created by the rapid beta decay of the daughter products in the fission process. The contemplated mechanism for antineutrino initiated fusion is the following: 1. The antineutrinos from the fission daughter products cause positron decay of deuterium by the process outlined above. 2. In a later fusion step, these positrons subsequently react with neutrons in deuterium to create antineutrinos. Electrons are unavailable to annihilate positrons in the plasma of the hydrogen bomb. 3. These antineutrinos thereafter react with more deuterium to form positrons, thereby propagating a chain reaction.

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