

Abstract Submitted
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A possible $^{12}\text{C}(n,2n)^{11}\text{C}$ total cross section measurement ANDREW EVANS, KEITH MANN, MARK YULY, Houghton College — Tertiary neutron production can be used as an indicator of the burn fraction of a deuterium-tritium pellet in inertial confinement fusion reactions. One way to monitor tertiary neutrons is by carbon activation using the $^{12}\text{C}(n,2n)^{11}\text{C}$ reaction, which has a threshold of 20.3 MeV and so is insensitive to primary neutrons produced in the DT reaction. However, the cross section for this reaction is not well known. Several different experimental techniques for measuring $^{12}\text{C}(n,2n)$ have been examined, with an activation experiment being the most feasible.

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