

Abstract Submitted
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Measurement of the ${}^3\text{H}(d, \gamma)/{}^3\text{H}(d, n)$ Branching Ratio at Center-of-Mass Energies Below 300 keV¹ CODY PARKER, CARL BRUNE, THOMAS MASSEY, DANIEL SAYRE², JOHN O'DONNELL, Ohio University — The branching ratio ${}^3\text{H}(d, \gamma){}^5\text{He}/{}^3\text{H}(d, n)\alpha$ has been measured using a 500-keV pulsed deuteron beam incident on a stopping titanium tritide target at the Edwards Accelerator Laboratory. The time-of-flight technique has been used to distinguish the γ -rays from the neutrons in the bismuth germinate γ -ray detector. Two stilbene scintillators and an NE-213 scintillator have been used to detect the neutrons using both the pulse-shape discrimination and time-of-flight techniques. The preliminary measurement at a cross-section-weighted average energy of 196 keV that produced a branching ratio measurement of $(6.9 \pm 1.6) \times 10^{-5}$ and plans for future measurements will be presented.

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