Abstract Submitted
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Beta-delayed neutron emission from ^{94}Rb at CARIBU[1] GEMMA WILSON, Louisiana State Univ., P CHOWDHURY, C LISTER, T BROWN, T CHILLERY, P COPP, E DOUCET, UMass Lowell, M CARPENTER, G SAVARD, S ZHU, Argonne Natl Lab, AJ MITCHELL, Australian Natl Univ — Beta-delayed neutron emission studies are important in the astrophysical r-process, nuclear structure and for nuclear reactor safety and design. The probability of β-delayed neutron emission in ^{94}Sr is 10.2(2)%. Many of the γ rays in ^{94}Sr are misplaced, and an estimated 26% are thought to be missing. Recently [1], substantial γ strength from above the neutron separation energy in ^{94}Sr has been reported. An experiment to understand this high-lying γ strength was performed with the X-Array (a high-efficiency HPGe clover array), SCANS (Small CLYC Array for Neutron Scattering) and the SATURN decay station (Scintillator And Tape Using Radioactive Nuclei) for γ, fast-neutron and β-particle detection, respectively. Data from β decay of ^{94}Rb ions delivered from CARIBU were collected in a triggerless digital data acquisition system, with detected β, n, and γ events correlated offline. A new ^{94}Sr level scheme will be presented, with confirmation of new levels and transitions, in addition to evidence of γ strength above the neutron separation energy. [1] J. L. Tain et al, Phys. Rev. Lett 115 (062502) 2015.

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