

Abstract Submitted
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Scintillator Detector Characterization for β -Delayed Neutron Emission¹ RACHEL WILLIAMS, Black Hills State University, SCOTT MARLEY, SERGIO LOPEZ, SUDARSAN BALAKRISHNAN, Louisiana State University — Previous methods to study β -delayed neutron (β DN) emission have yielded high efficiency or modest energy resolution, but not both. A new method to study β DN emission utilizes an ion trap to keep the radioactive ions effectively at rest and a series of detectors to measure the time of flight of the recoil ion and other decay radiation. A procedure and mechanism were developed to systematically characterize the position and low-energy response of the Δ E-E scintillator detectors utilized with the ion trap. The mechanism was designed and subsequently used to hold various sources, including ^{113}Sn and ^{207}Bi , at a set distance from the face of the Δ E scintillator, and rotate to characterize all areas of the detector.

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