

Abstract Submitted
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Time and Position Resolution Studies for the VANDLE Prototype Detectors¹ IRENA SPASSOVA, JOLIE CIZEWSKI, WILLIAM PETERS, Rutgers University, CATALIN MATEI, ORAU — The Versatile Array of Neutron Detectors at Low Energies (VANDLE) was developed to study the properties of unstable nuclei via (d,n) reactions and beta delayed neutron emission. This array is comprised of individual scintillator bars of two set lengths: 2 m and 60 cm, coupled to photomultiplier tubes (PMTs). The attenuation length of the scintillator bar plays a direct role in the detector efficiency while the position and timing calibrations help pinpoint where an event occurred in the bar. By using different configurations and sources, it was possible to measure the attenuation length and the position and timing resolutions. Experiments have also been performed pertaining to the construction of the detectors and the materials used in coupling the scintillator to the PMT. Such tests will help optimize the performance of the detectors. The experimental results for the prototype detectors will be presented.

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