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Optimizing VANDLE for Decay Spectroscopy N.T. BREWER, S.Z. TAYLOR, R. GRZYWACZ, M. MADURGA, S.V. PAULAUSKAS, University of Tennessee, J.A. CIZEWSKI, Rutgers University, W.A. PETERS, Oak Ridge Associated Universities, VANDLE COLLABORATION — Understanding the decay properties of neutron rich isotopes has well established importance to the path of the r-process [1] and to the total decay heat for reactor physics [2]. Specifically, the half-life, branching ratio and spectra for β-n decay is of particular interest. With that in mind, we have continued attempts to improve upon the Versatile Array of Neutron Detectors at Low Energy (VANDLE) in terms of efficiency and TOF resolution through the use of new and larger scintillators. Details of the new implementation, design and characterization of the array will be shown and compared to previous results.

[1] M. Madurga et.al., Phys Rev. Lett. **109**,112501 (2012)
[2] Rykaczewski, K. P., Physics **3**, 94 (2010)

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