

Abstract Submitted
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Deuterated Liquid Scintillators: A New Tool for Neutrons without ToF for RNB Reaction Studies MITAIRE OJARUEGA, FRED BECCHETTI, Department of Physics, University of Michigan, Ann Arbor, MI 48109, J.J. KOLATA, AMY ROBERTS, Department of Physics, University of Notre Dame, Notre Dame, IN 46556, RAMON TORRES-ISEA, MICHAEL FEBBRARO, Department of Physics, University of Michigan, Ann Arbor, MI 48109 — An array of 6 large deuterated neutron detectors ((100mm x 150mm) has been developed at the University of Michigan. These detectors will make it possible to carry out RNB measurements with neutrons as the outgoing particle. The ability of this detector to obtain neutron energy spectra from nuclear reactions without the use of time of flight (ToF) has been verified and will be utilized. Typical data collected with these detectors showing optimized pulse-shape-discrimination, some using digital pulse analysis from this detector will be presented. This work is supported by the U.S. National Science Foundation under Contracts PHY-0652591, CMMI 0936649, PHY-0969456 and PHY-0758100.

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