

Abstract Submitted
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Progress in the development and characterization of position- and n/γ -discriminating neutron detector modules¹ C.E. PARKER, Cyclotron Institute, Texas A&M University, D.P. SCRIVEN, G.V. ROGACHEV, Dept. of Physics & Astronomy and Cyclotron Institute, Texas A&M University, G. CHRISTIAN, Dept. of Astronomy & Physics, Saint Mary's University, and Dept. of Physics & Astronomy and Cyclotron Institute, Texas A&M University, L.G. SOBOTKA, Depts. of Chemistry and Physics, Washington University, St. Louis, E. ABOUD, Dept. of Physics & Astronomy and Cyclotron Institute, Texas A&M University, S. AHN, J. BISHOP, G. CHUBARIAN, E. KOSHCHIY, S. OTA, Cyclotron Institute, Texas A&M University, J.M. ELSON, A.G. THOMAS, Dept. of Chemistry, Washington University, St. Louis, N. DRONCHI, Dept. of Physics, Washington University, St. Louis — We present progress in the development of a neutron-detector array consisting of modules made from *p*-terphenyl, a bright, fast, n/γ -discriminating solid organic scintillator. The module is comprised of $2\times 2\times 2\text{cm}^3$ *p*-terphenyl crystals that have been optically-coupled lengthwise to create a pseudo-bar module. While only relying on a photomultiplier tube on each end, the detector module is capable of distinguishing interactions between six or more crystals while maintaining the scintillator's pulse-shape discrimination (PSD) capability down to $\sim 150\text{keVee}$. Here we present the PSD, position-discrimination, and timing-resolution characteristics of a single module. Additionally, the progress on array construction and the planned commissioning experiment will be briefly discussed.

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Cody Parker
Cyclotron Institute, Texas A&M University

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