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First Data with the Hybrid Array of Gamma-Ray Detectors (HAGRiD)[1] KARL SMITH, S BURCHER, A.B. CARTER, R. GRYZWACZ, K.L. JONES, S. MUNOZ, S.V. PAULAUSKAS, K. SCHMITT, C. THORNSBERRY, Univ. of Tennessee Knoxville, K.A. CHIPPS, M. FEBBRARO, S.D. PAIN, Oak Ridge Natl. Lab., T. BAUGHER, J.A. CIZEWSKI, A. RATKIEWICZ, B. TOOMEY, Rutgers Univ. — The structure of nuclei provides insight into astrophysical reaction rates that are difficult to measure directly. These studies are often performed with transfer reaction and beta-decay measurements. These experiments benefit from particle-gamma coincident measurements providing information beyond that of particle detection alone. The Hybrid Array of Gamma Ray Detectors (HAGRiD) of $LaBr_3$(Ce) scintillators has been designed with this purpose in mind. The design of the array permits it to be coupled with particle detector systems, such as the Oak Ridge Rutgers University Barrel Array (ORRUBA) of silicon detectors and the Versatile Array of Neutron Detectors at Low Energy (VANDLE). It is also designed to operate with the Jet Experiments in Nuclear Structure and Astrophysics (JENSA) advanced target system. HAGRiD's design avoids compromising the charged-particle angular resolution due to compact geometries often used to increase the gamma efficiency in other systems. First experimental data with HAGRiD coupled to VANDLE as well as ORRUBA and JENSA will be presented.

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