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Study of the Beta-delayed Neutrons from ^{77}Cu using VANDLE
STAN PAULASKAS, ROBERT GRZYWACZ, MIGUEL MADURGA, University of Tennessee, WILLIAM PETERS, Oak Ridge Associated Universities, VANDLE COLLABORATION — The Versatile Array of Neutron Detectors at Low Energy (VANDLE) measures the energy of neutrons emitted from nuclear excited states populated through beta decay or transfer reactions. The time-of-flight technique determines the energy, which requires a time resolution on the order of 1 ns. In addition, the detector requires a low threshold to measure neutrons at energies of 100 keV or lower. A successful experimental campaign at the Holifield Radioactive Beam Facility, using ions produced via proton induced fission of ^{238}U , has yielded preliminary results on beta-delayed neutrons emitted during the decay of ^{77}Cu . Of particular interest is the observation of low-energy neutrons emitted from states well above the neutron separation energy. Results from this experiment will be presented. This work was supported by the NNSA through DOE Cooperative Agreement DE-FG52-08NA28552.

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