

Abstract Submitted  
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**A new  $\Delta E$ -ToF particle identification device<sup>1</sup>** CHENYANG NIU, ADAM ANTHONY, DANIEL BAZIN, KYLE BROWN, National Superconducting Cyclotron Laboratory, ZBIGNIEW CHAJECKI, Western Michigan University, JIE CHEN, THOMAS GINTER, WILLIAM LYNCH, WOLFGANG MITTIG, CHI-EN TEH, BETTY TSANG, RENSHENG WANG, JOSEPH WIESKE, National Superconducting Cyclotron Laboratory — The particle identification (PID) technique plays a key role in radioactive isotope beams experiments. To support a fission experiment recently finished in the n-deficient lead region, a new PID device was developed using the time-of-flight (ToF) and energy loss ( $\Delta E$ ) method. Two microchannel plate (MCP) detectors were installed to measure the ToF. A new gridded ion chamber with 13 segmented pads was designed and built to provide both  $\Delta E$  measurement and beam tracking. The performance of the  $\Delta E$ -ToF device was tested with both stable and radioactive beams. The secondary beam was well separated by this device in the experiment. In this talk, the construction and experimental performance of the  $\Delta E$ -ToF device will be described.

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