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A new ΔE -ToF particle identification device CHENYANG NIU, ADAM ANTHONY, YASSID CHAJECKI, JON BARNEY, DANIEL BAZIN, SAUL BECCEIRO, KYLE BROWN, National Superconducting Cyclotron Laboratory, ZBIGNIEW CHAJECKI, Western Michigan University, JIE CHEN, KAITLIN COOK, JUSTIN ESTEE, THOMAS GINTER, ELAIN KWAN, WILLIAM LYNCH, WOLFGANG MITTIG, ANDREW PYPE, CHANDANA SUMITHRARACHCHI, SEAN SWEANY, CHI-EN TEH, CHUN YUEN TSANG, BETTY TSANG, REN-SHENG WANG, NATHAN WATWOOD, SARAH WEGERT, 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 (ΔE) 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 provided both ΔE measurement and beam tracking. The performance of the ΔE -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 ΔE -ToF device will be described.

> Chenyang Niu National Superconducting Cyclotron Laboratory

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