

Abstract Submitted
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PID Determination and Charge State Contamination¹ JOSEPH WIESKE, WILLIAM LYNCH, KYLE BROWN, Michigan State University, ZBIGNIEW CHAJECKI, Western Michigan University, TOM GINTER, ADAM ANTHONY, CHENYANG NIU, WOLFGANG MITTIG, Michigan State University, HIRA COLLABORATION, ATTPC COLLABORATION — Studying properties and decays of heavy isotopes is a goal of rare isotope beam physics that comes with challenges. Even if separation of isotopes is achieved using particle identification (PID) systems, the isotopic species remain to be determined, and charge state contamination must be quantified. The National Superconducting Cyclotron Laboratory (NSCL) recently conducted an experiment to measure the fission properties of nuclei in the neutron deficient Pb region. A radioactive cocktail beam was tuned in the A1900 fragment separator to allow for separation of isotopes. The beam was identified using the ΔE -ToF method. In order to quantify charge state contamination, a total kinetic energy measurement of the beam was made using Si PIN detectors. In addition, a high purity Germanium crystal (HPGe) measured the decay of long lived isomers for beam tagging to provide another measure of charge state contamination. This talk will discuss the methods of isomer-tagging and measurement of charge state contamination.

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