

Abstract Submitted  
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**Fission in the Neutron-deficient Lead Region**<sup>1</sup> ADAM ANTHONY, DANIEL BAZIN, KYLE BROWN, National Superconducting Cyclotron Laboratory, ZBIGNIEW CHAJECKI, Western Michigan University, THOMAS GINTER, WILLIAM LYNCH, WOLFGANG MITTIG, CHENYANG NIU, JOSEPH WIESKE, National Superconducting Cyclotron Laboratory, HIRA COLLABORATION, AT-TPC COLLABORATION — Rare isotope beam facilities offer the opportunity to study the physics of isotopes far from stability. Following the discovery of an unexpected region of asymmetric beta-delayed fission in the neutron deficient mercury region, there has been a flurry of work to study fission properties of other nuclei in the region. At the National Superconducting Cyclotron Laboratory (NSCL), an experiment was designed to measure the fission properties of nuclei in the transition region from asymmetric to symmetric fission. A radioactive beam centered around  $\text{Pb}^{197}$  was produced by the coupled cyclotrons at the NSCL. Helium-induced fusion-fission properties were measured as a function of beam energy. The Active-Target Time Projection Chamber (AT-TPC) served as the helium gas target and was used to separate fusion-fission events from the background. This talk focuses on using a TPC to measure the properties of fission events in an inverse-kinematics setting.

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