

Abstract Submitted  
for the DNP11 Meeting of  
The American Physical Society

**SAMURAI-TPC: A Time Projection Chamber for Constraining the Asymmetry Energy at High Density** A.B. MCINTOSH, N. MAASS, S.J. YENNELLO, Texas A&M University Cyclotron Institute, J. BARNEY, Z. CHAJECKI, C.F. CHAN, J.W. DUNN, J. ESTEE, J. GILBERT, F. LU, W.G. LYNCH, R. SHANE, M.B. TSANG, NSCL, Michigan State University, M. FAMIANO, Western Michigan University, T. ISOBE, H. SAKURAI, A. TAKETANI, RIKEN, Japan, T. MURAKAMI, Kyoto University, SAMURAI-TPC COLLABORATION — The SAMURAI-TPC is a time projection chamber designed to measure pions and light charged particles. By measuring pion yield ratios and particle flow in heavy ion collisions around  $E=200A$  MeV, we expect to constrain the behavior of the nuclear asymmetry energy around twice saturation density. In this talk, the design and construction of the TPC components will be discussed. Upon completion, the SAMURAI-TPC will be installed in the SAMURAI spectrometer at the Radioactive Isotope Beam Facility at RIKEN, Japan. This work is supported by the Department of Energy (DE-SC0004835).

Alan McIntosh  
Texas A&M University Cyclotron Institute

Date submitted: 30 Jun 2011

Electronic form version 1.4