

Abstract Submitted  
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**Field cage development for a time-projection chamber to constrain the nuclear symmetry energy**<sup>1</sup> J. ESTEE, J. BARNEY, Z. CHAJECKI, NSCL, MSU, M. FAMIANO, Western Michigan University, J. DUNN, F. LU, W.G. LYNCH, NSCL, MSU, A.B. MCINTOSH, Texas A&M University Cyclotron Institute, T. ISOBE, T. MURAKAMI, H. SAKURAI, RIKEN, R. SHANE, NSCL, MSU, A. TAKETANI, RIKEN, S. TANGWANCHAROEN, M.B. TSANG, NSCL, MSU, S. YENNELLO, Texas A&M University Cyclotron Institute, SAMURAI TPC COLLABORATION — The SAMURAI time-projection chamber (sTPC) is being developed for use in the dipole magnet of the newly-commissioned SAMURAI spectrometer at the RIBF facility in Japan. The main scientific objective of the sTPC is to provide constraints on the nuclear symmetry energy at supra-saturation densities. The TPC allows for tracking and identification of light charged particles such as pions, protons, tritons and  $^3\text{He}$ . The sTPC must have a Cartesian geometry to match the symmetry of the dipole magnet. The walls of the field cage (FC) detector volume consist of sections of rigid, two-layer circuit boards. Inside and outside copper strips form decreasing equipotentials via a resistor chain, and create a uniform electric field with a maximum of 400 V/cm. The FC volume is hermetically sealed from the enclosure volume to create an insulation volume which can be filled with dry  $\text{N}_2$  to inhibit corona discharge. I will be presenting the current status of the design and assembly of the sTPC field cage.

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