

Abstract Submitted  
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**Probing the Symmetry Energy at supra-saturation density with the S $\pi$ RIT Time Projection Chamber**<sup>1</sup> JONATHAN BARNEY, Michigan State University, S $\pi$ RIT COLLABORATION — The S $\pi$ RIT Time Projection Chamber (TPC) was designed and constructed at the National Superconducting Cyclotron Laboratory, Texas AM University, RIKEN and Kyoto University. It was used in a campaign of experiments at the Radioactive Isotope Beam Factory at RIKEN, intended to constrain the symmetry term of the Nuclear Equation of State at around twice saturation density. The commissioning of the S $\pi$ RIT TPC was completed in spring 2016, with the experimental campaign also performed in 2016. The experiment is designed especially to compare the ratio of negative and positive pions produced in asymmetric collisions. Four separate Sn beams (<sup>132</sup>Sn, <sup>124</sup>Sn, <sup>112</sup>Sn, <sup>108</sup>Sn) are impinged on isotopically enriched fixed Sn (<sup>124</sup>Sn, <sup>112</sup>Sn) targets, with an energy at about 270 AMeV. Most pions are produced in the central region of the collision and provide an effective probe for the high density region of the collision. I will present preliminary results from the experiments and the on-going efforts to analyze the pion spectra.

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Jonathan Barney  
Michigan State University

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