ID de Contribution: **17** Type: **Non spécifié**

Highlights of the SpiRIT Time Projection Chamber

jeudi 18 janvier 2018 11:10 (25 minutes)

In order to maximize the science potentials of low intensities rare isotope beams, we need a new generation of high resolution detectors with high efficiency. Time Projection Chambers (TPC) with large angular coverage and good energy and position resolution can be used in experiments across a broad range of beam energies and extend the scientific reach of radioactive beams.

The SAMURAI Pion Reconstruction and Ion-Tracker (SπRIT) TPC was designed to constrain the symmetry-energy term in the nuclear Equation of State which is not only important for the fundamental understanding of nuclei but also for understanding the dynamics of the neutron star mergers. The first experimental campaign to measure charged fragments including pions emitted from the reactions of 132,124,112,108Sn (beam at 270 MeV/nucleon)+ 124,112Sn (target) was successfully carried out in the Spring of 2016 at the Radioactive Isotope Beam Factory (RIBF) at RIKEN. In this talk, I will give highlights of the design, construction and performance of the SpiRIT TPC.

This material is based on work supported by the DOE under Grant No. DE-SC0014530,
DE-NA0002923 and NSF under Grant No. PHY-1102511 and the Japanese MEXT Grant-in-Aid for Scientific Research on Innovative Area Grant No. 24105004.

Authors: TSANG, Betty (NSCL/Michigan State University); COLLABORATION, SpiRIT

Orateur: TSANG, Betty (NSCL/Michigan State University)