

Abstract Submitted
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A Charged Particle Veto Wall for the Large Area Neutron Array (LANA)¹ K. ZHU, National Superconducting Cyclotron Laboratory, Z. CHAJECKI, Western Michigan University, C. ANDERSON, J. BROMELL, K. BROWN, J. CROSBY, S. KODALI, W.G. LYNCH, P. MORFOUACE, S. SWEANY, M.B. TSANG, C. TSANG, National Superconducting Cyclotron Laboratory, J.J. BRETT, J.L. SWAIM, Western Michigan University — Comparison of neutrons and protons emitted in heavy ion collisions is one of the observables to probe symmetry energy, which is related to the properties of neutron star. In general, neutrons are difficult to measure and neutron detectors are not as easy to use or as widely available as charged particle detectors. Two neutron walls (NW) called LANA exist at the National Superconducting Cyclotron Laboratory. Although the NSCL NW attains excellent discrimination of γ rays and neutron, it fails to discriminate charged particles from neutrons. To ensure near 100% rejection of charged particles, a Charged Particle Veto Wall (VW) is being jointly built by Michigan State University and Western Michigan University. It will be placed in front of one NW. To increase efficiency in detecting neutrons, the second neutron wall is stacked behind it. In this presentation, I will discuss the design, construction and testing of the VW together with the LANA in preparation of two approved NSCL experiments to probe the density and momentum dependence of the symmetry energy potentials in the equation state of the asymmetric nuclear matter.

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