

Abstract Submitted
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A Low Energy Neutron Detector Array (LENDa) for measuring the (p,n) reaction with rare-isotope beams at intermediate energies¹ MASAKI SASANO, SAM M. AUSTIN, D. BAZIN, S. CANNON, J.M. DEAVEN, C.J. GUESS, G.W. HITT, R.T. MEHARCHAND, D.T. NGUYEN, G. PERDIKAKIS, A. PRINKE, Y. SHIMBARA, R.G.T. ZEGERS, NSCL, Michigan State University — A Low Energy Neutron Detector Array (LENDa) has been developed for measuring the (p,n) reaction with rare-isotope beams at intermediate energies. This reaction is a powerful probe to study nuclear spin-isospin responses such as Gamow-Teller giant resonance. But, until recently, such study has been restricted to a region of stable nuclei because it is difficult to detect low-energy recoil neutrons of the (p,n) reaction with rare-isotope beams in inverse kinematics. This will be made possible by using LENDa, whose design is optimized for measuring time-of-flight of low-energy neutrons with both of a good efficiency and a high resolution. In this talk, the experimental determination of the efficiency and time and position resolutions of LENDa as well as how to perform (p,n) experiments with LENDa will be presented.

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Masaki Sasano
NSCL, Michigan State University

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