

Abstract Submitted
for the DNP11 Meeting of
The American Physical Society

Measurement of emitted neutrons and protons from $^{112,124}\text{Sn}$ + $^{112,124}\text{Sn}$ at $E_{\text{beam}} = 50$ MeV/nucleon and 120 MeV/nucleon¹ D.D.S. COUPLAND, M. YOUNGS, W.G. LYNCH, M.B. TSANG, Z. CHAJECKI, R. HODGES, M. KILBURN, FEI LU, J. NOVAK, A. SANETULLAEV, J. WINKELBAUER, MSU / NSCL, JENNY LEE, RIKEN, M.A. FAMIANO, B. GIACHERIO, Western Michigan University, T.K. GHOSH, Variable Energy Cyclotron Centre, P. RUSSOTTO, G. VERDE, INFN, C. SFIENTI, GSI — The nuclear symmetry energy affects many aspects of nuclear structure, nuclear astrophysics, and nuclear reactions. The spectral ratio of neutrons to protons from central heavy ion collisions is sensitive to the symmetry energy below saturation density, but previous measurements of the ratio have large uncertainties. In addition, transport model calculations of the ratio using the IBUU04 and ImQMD05 codes differ greatly, perhaps due to the effective mass splitting in the nuclear medium. A recent experiment at NSCL/MSU measured neutrons and protons emitted from central collisions of $^{112,124}\text{Sn} + ^{112,124}\text{Sn}$ at $E_{\text{beam}} = 50$ MeV/nucleon to probe the symmetry energy, and at $E_{\text{beam}} = 120$ MeV/nucleon to probe the mass splitting. First results will be presented and compared to transport model calculations.

¹This work is supported by the National Science Foundation under Grant PHY-0606007.

Daniel Coupland
MSU / NSCL

Date submitted: 28 Jun 2011

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