

Abstract Submitted
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Measurement of isospin diffusion from isoscaling of heavy fragment yields in 70 MeV/u Sn+Sn collisions JACK WINKELBAUER, NSCL/MSU, R.H. SHOWALTER, MSU/NSCL, M.B. TSANG, W.G. LYNCH, Z. CHAJECKI, M.D. YOUNGS, D.D.S. COUPLAND, NSCL/MSU, FEI LU, MSU/NSCL, A. SANETULLAEV, R. SHANE, S. TANGWANCHAROEN, NSCL/MSU, M. FAMIANO, WMU, S. GEORGE, MSU/NSCL, R. CHARITY, L. SOBOTKA, J. ELSON, WU-STL, R DE SOUZA, IU, Y ZHANG, CIAE — Much effort has been undertaken recently to improve constraints on the symmetry energy term in the nuclear equation of state. Specifically, the behavior of the symmetry energy above and below saturation density plays a significant role in the properties of neutron stars, the structure of heavy nuclei, and the dynamics of nuclear reactions. The tendency for neutrons to drift from a neutron-rich region to a neutron-deficient region during a peripheral collision of heavy nuclei is known as isospin diffusion, and has been shown to be sensitive to the symmetry energy at sub-saturation densities. Isospin diffusion between projectiles of $^{112,118,124}\text{Sn}$ at 70MeV/u and targets of $^{112,118,124}\text{Sn}$ has been measured, using isoscaling ratios of heavy fragments as a tracer of the isospin content of the excited projectile-like fragment. The validity of using isoscaling as a surrogate for the isospin asymmetry will be discussed, and the associated isospin diffusion results will be presented.

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