

Abstract Submitted  
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**Isospin Observables from Fragment Energy Spectra**<sup>1</sup> RACHEL HODGES, T.X. LIU, W.G. LYNCH, M.B. TSANG, X.D. LIU, W.P. TAN, M.J. VAN GOETHEM, G. VERDE, A. WAGNER, H.F. XI, H.S. XU, NSCL/MSU, M. FAMIANO, WMU, R.T. DE SOUZA, V.E. VIOLA, IU, R.J. CHARITY, L.G. SOBOTKA, WU — The energy spectra of light charged particles and intermediate mass fragments from  $^{112}\text{Sn}+^{112}\text{Sn}$  and  $^{124}\text{Sn}+^{124}\text{Sn}$  collisions at an incident energy of  $E/A=50$  MeV have been measured with a large array of Silicon strip detectors. We used charged particle multiplicities detected in a near  $4\pi$  array to select data from the central collision region. We study isospin observables analogous to ratios of neutron and proton spectra, including double ratios and yield ratios of  $t/{}^3\text{He}$  and of asymmetries constructed from fragments with  $Z=3-8$ . Using the energy spectra, we can construct these observables as functions of kinetic energy and observe a large difference in the fragment observables if fragments contributing to sequential decays are included.

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