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**Investigating the fragmentation of excited nuclear systems**[1] JENNIFER ERCHINGER[2], L.W. MAY, P. MARINI, S. WUENSCHEL, S.J. YENNELLO, Cyclotron Institute, TAMU — Constraints on the symmetry energy, important in the nuclear equation of state, can be provided by examining the isotopic composition of fragments emitted from excited nuclear systems. These fragments can be studied by isotopic scaling (isoscaling) of fragment yields from two sources with different neutron to proton ratios (N/Z). Traditionally, isoscaling compares isotopically identified fragments from two different reactions, requiring an assumption that the N/Z of the source is that of the reacting system or estimated from a model-based correction. Wuenschel *et al.* used emitted charged particles and neutrons to reconstruct quasiprojectile (QP) N/Z. Bins in QP N/Z were used as the sources for the isoscaling analysis instead of different reaction systems. They showed that comparing bins within a system better defines the source N/Z, giving better constrained symmetry energy. The current research takes an in-depth look at bin-to-bin isoscaling and provides optimal delta and source constraints and shows the effects of excitation energy on isoscaling.

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