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Scaling properties of light-cluster production ZBIGNIEW CHAJECKI, Western Michigan University, MICHAEL YOUNGS, DANIEL D. COUPLAND, WILLIAM LYNCH, BETTY TSANG, NSCL/MSU, ABDELOUAHAD CHBIHI, Ganil, France, PAWEL DANIELEWICZ, NSCL/MSU, ROMUALDO DESOUZA, Indiana University, Bloomington, Indiana, MICHAEL FAMIANO, Western Michigan University, TILAK GHOSH, VECC Kolkata, India, B. GIACHERIO, Western Michigan University, VLAD HENZL, DANIELA HENZLOVA, NSCL/MSU, SYLVIE HUDAN, Indiana University, Bloomington, Indiana, MICHA KILBURN, JENNY LEE, FEI LU, ANDREW ROGERS, NSCL/MSU, PAULO RUSSOTTO, GIUSEPPE VERDE, INFN/Catania, ALISHER SANETULLAEV, RACHEL SHOWALTER, NSCL/MSU, LEE SOBOTKA, Washington University in St Louis, MARK WALLACE, JACK WINKELBAUER, NSCL/MSU — We show, using the experimental data from Ca+Ca and Sn+Sn collisions, that ratios of light-particle energy spectra display scaling properties that can be accurately described by effective local chemical potentials. This demonstrates the equivalence of t/3He and n/p spectral ratios and provides an essential test of theoretical predictions of isotopically resolved light-particle spectra. In addition, this approach allows direct comparisons of many theoretical n/p spectral ratios to experiments where charged-particle spectra but not neutron spectra are accurately measured. Such experiments may provide much more quantitative constraints on the density and momentum dependence of the symmetry energy.

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