

Abstract Submitted
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Asymmetry Dependence of Nuclear Temperatures and Densities ALAN MCINTOSH, A. BONASERA, Z. KOHLEY, S. GALANOPOULOS, K. HAGEL, L.W. MAY, P. MARINI, D.V. SHETTY, W.B. SMITH, S.N. SOISSON, G.A. SOULIOTIS, B.C. STEIN, R. TRIPATHI, S. WUENSCHERL, S.J. YENNELLO, Texas A&M University — Quasi-projectile sources produced in collisions of $70\text{Zn}+70\text{Zn}$, $64\text{Zn}+64\text{Zn}$ and $64\text{Ni}+64\text{Ni}$ at $E/A=35\text{MeV}$ have been reconstructed using the charged particles and free neutrons measured in the NIMROD-ISiS 4- π detector. Equilibrated sources were selected which have a mass $A=48-52$ and which are on average spherical. Caloric curves for these quasi-projectiles have been extracted with the quadrupole momentum fluctuation thermometer (QMFT) and the Albergo thermometer. The classical QMFT and the Albergo thermometer exhibit a clear dependence on the composition, $(N-Z)/A$, of the source. For a given excitation (E^*/A), the neutron-poor sources exhibit higher temperatures. The quantum QMFT exhibits a somewhat different dependence on the composition. Since the density and temperature are correlated in the quantum QMFT, this difference may be due to a dependence of the nuclear density on the composition.

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