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Modeling Timescale of Equilibration in Dinuclear Systems KRYSTIN STIEFEL, ZACH KOHLEY, National Superconducting Cyclotron Laboratory, Michigan State University — The break-up and N/Z equilibration processes of dinuclear systems can be utilized to place constraints on the density dependence of the symmetry energy. In semi-peripheral heavy-ion collisions, excited projectile-like fragments can be formed which decay through binary breakup. The rotation of this binary system can be used to probe the timescale of the N/Z equilibration of the system. A previous experiment performed by the Indiana University research group using this approach has shown that initial neutron gradients can have an effect on the equilibration processs [1]. Simulations using the Constrained Molecular Dynamics (CoMD) model have been executed and compared to experimental data. The comparison will allow for a better understanding of the timescale of equilibration.

[1] K. Brown et. al. Phys. Rev. C 87, 061601 (2013).

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