Title:

The influence of transport variables on isospin transport ratios

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Body:

The influence of transport quantities on isospin equilibration in peripheral ^{112}Sn+^{112}Sn, ^{112}Sn+^{124}Sn, ^{124}Sn+^{112}Sn, and ^{124}Sn+^{124}Sn collisions is studied in the Boltzmann-Uehling-Uhlenbeck model. The isospin transport ratio constructed from the asymmetry of the projectile residue has been shown to contain information about the density dependence of the symmetry energy. However, previous transport simulation analyses of isospin diffusion have arrived at different conclusions about the symmetry energy. This may be due to different model formulations, or to different treatments of transport quantities other than the symmetry energy. To explore this possibility, we examine the effect of the momentum dependence of the mean field, in-medium nucleon-nucleon cross sections, light composite production, and the stiffness of the symmetric equation of state on reaction dynamics and isospin diffusion. Our simulations will try to untangle the various effects and their influence on the extraction of the symmetry energy terms in the EOS. Preliminary results from the simulations and comparisons to other transport model calculations will be presented.