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Nucleon Transfer Calculations Using the HIPSE Model Z. KOHLEY, Texas A & M University, D. LACROIX, LPC CAEN, G.A. SOULIOTIS, Texas A & M University, A.L. KEKSIS, Los Alamos National Lab, B. STEIN, D.V. SHETTY, S. SOISSON, S.J. YENNELLO, Texas A & M University — The HIPSE (Heavy-Ion Phase-Space Exploration) model has been used to examine nucleon transfer during the interaction of the projectile and target. The results of the HIPSE model were compared to experimental data obtained on the FAUST array for ^{20}F + ^{108}Ag, ^{20}F + ^{197}Au, ^{20}Na + ^{197}Au, and ^{20}Ne + ^{197}Au at 32 MeV/u. The apparent mass change of the projectile was calculated for fully reconstructed events, in which the total detected charge was equal to the charge of the beam. The experimental results had shown that both the mean values and the distribution widths of the mass transfer plots varied with the N/Z of the compound system. The HIPSE results were in good agreement with the experimental data for the more neutron-rich systems. For the less neutron-rich systems, the HIPSE model overestimated the loss of neutrons from the projectile. The difference between the theoretical and experimental data may be due to the fact that the HIPSE model does not treat the transfer of neutrons and protons differently. The HIPSE code was modified to allow for the percent transfer of neutrons and protons to be controlled separately. Comparisons of HIPSE coupled with the SMM, SIMON and Gemini de-excitation codes will be presented.

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