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**Microscopic calculations of dynamics and N/Z equilibration in peripheral collisions below the Fermi energy.** G.A. SOULIOTIS, D.V. SHETTY, S. GALANOPOULOS, S.J. YENNELLO, Cyclotron Institute, Texas A&M University — A systematic study of heavy residues formed in peripheral collisions below the Fermi energy has been undertaken at Texas A&M aiming at obtaining information on the mechanism of nucleon exchange and the course towards N/Z equilibration [1,2]. We expect to get insight on the dynamics and the nuclear equation of state by comparing our heavy residue data to detailed calculations using microscopic models of quantum molecular dynamics (QMD) type. We are performing calculations using two codes: the CoMD code of M. Papa, A. Bonasera [3] and the CHIMERA-QMD code of J. Lukasik [4]. Both codes implement an effective interaction with a nuclear-matter compressibility of K=200 (soft EOS) with several forms of the density dependence of the nucleon-nucleon symmetry potential. CoMD imposes a constraint in the phase space occupation for each nucleon restoring the Pauli principle at each time step of the collision. CHIMERA-QMD uses a Pauli potential term to mimic the Pauli principle. Results of the calculations and comparisons with our residue data will be presented. [1] G.A. Souliotis et al., Phys. Rev. Lett. 91, 022701 (2003). [2] G.A. Souliotis et al., Phys. Lett. B 588, 35 (2004). [3] M. Papa et al., Phys. Rev. C 64, 024612 (2001). [4] J. Lukasik, Z. Majka, Acta Phys. Pol. B 24, 1959 (1993).

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