Abstract Submitted
for the DNP11 Meeting of
The American Physical Society

The role of transfer couplings in the fusion of Sn+Ni and Te+Ni systems Z. KOHLEY, J.F. LIANG, D. SHAPIRA, R.L. VARNER, C.J. GROSS, J.M. ALLMOND, Oak Ridge National Laboratory, A.L. CARALEY, State Univ. of New York at Oswego, E.A. COELLO, F. FAVELA, Universidad Nacional Autonoma de Mexico, K. LAGERGREN, P.E. MUELLER, Oak Ridge National Laboratory — Evaporation residue and fission cross sections have been measured for the radioactive ^{132}Sn+^{58}Ni and stable ^{130}Te+^{58,64}Ni systems at energies near the Coulomb barrier. Through a comparison with previous Sn+Ni measurements, the role of transfer couplings on the heavy-ion fusion has been examined. While the number of positive Q-value neutron transfer channels varied widely between the different Sn+Ni and Te+Ni systems, the reduced excitation functions were equivalent. This is in contrast to a number of previous studies where large enhancements in the sub-barrier fusion cross sections were observed in systems with positive Q-value neutron transfer channels. The present results suggest a significant change in the influence of transfer couplings on the fusion process for the Sn+Ni and Te+Ni systems. This work was supported by DOE Office of Nuclear Physics

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Date submitted: 28 Jun 2011 Electronic form version 1.4