

Abstract Submitted
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First study of neutron-transfer onto neutron-rich ^{80}Ge ¹ S. AHN, K.L. JONES, S.T. PITTMAN, University of Tennessee at Knoxville, G. ARBANAS, D.W. BARDAYAN, K.Y. CHAE, C.D. NESARAJA, S.D. PAIN, M.S. SMITH, Oak Ridge National Laboratory, A.S. ADEKOLA, J.A. CIZEWSKI, S. HARDY, M.E. HOWARD, B. MANNING, P.D. O'MALLEY, Rutgers University, W.A. PETERS, I. SPASSOVA, Oak Ridge Associated Universities, K.A. CHIPPS, Colorado School of Mines, J.C. BLACKMON, M. MATOS, B.C. RASCO, Louisiana State University, R.L. KOZUB, Tennessee Technological University — Sensitivity studies have shown that the individual neutron capture rates and the structure of exotic nuclei near neutron closed shells are particularly important for constraining models of rapid neutron capture nucleosynthesis. Currently, there is little experimental data for the relevant unstable nuclei such as ^{81}Ge . The low-lying levels of the $N = 49$ nucleus ^{81}Ge have been studied by the first neutron transfer measurement on beams of exotic ^{80}Ge nuclei at 310 MeV (3.875 MeV/u) in inverse kinematics at the Holifield Radioactive Ion Beam Facility at Oak Ridge National Laboratory. The excitation energies and the angular distributions of low-lying levels were measured, and neutron capture cross sections on ^{80}Ge have been calculated in a direct-semidirect model. The experimental setup and the preliminary results will be presented.

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