

Abstract Submitted
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Heavy-ION Induced Transfer Reactions On ^{130}Sn SEAN BURCHER, A. BEY, K.L. JONES, A. AYRES, Univ of Tennessee, Knoxville, J. ALLMOND, A. GALINDO-URRIBARI, D.C. RADFORD, J.F. LIANG, C.D. NESERAJA, S.D. PAIN, M.S. SMITH, D.W. STRACENER, R.L. VARNER, Oak Ridge National Laboratory, K.T. SCHMITT, B.M. MANNING, Los Alamos National Laboratory, S.H. AHN, Michigan State University, D.W. BARDAYAN, P.D. O'MALLEY, Notre Dame, J.A. CIZEWSKI, M.E. HOWARD, Rutgers, S.T. PITTMAN, M. MATOS, Louisiana State University, R.F GARCIA-RUIZ, KU Leuven, E. PADILLA-RODAL, UNAM, R. KOZUB, Tennessee Technological University — Nuclear data in the region of the doubly-magic nucleus ^{132}Sn is of particular interest for R-process nucleosynthesis as well as benchmarking nuclear structure models. The j-dependence and selectivity of heavy-ion induced transfer reactions to the bound-state wave function of a target nucleus can be used to deduce the spin and parity of the directly populated states. Results from $^{130}\text{Sn}(9\text{Be}, 8\text{Be } \gamma)$ AND $^{130}\text{Sn}(^{13}\text{C}, ^{12}\text{C} \gamma)$ single-neutron transfer reactions will be presented. By comparing the relative cross sections of the populated states from two different targets, spin-parity assignments were confirmed. In addition, limits on the lifetimes of some of the populated states have been inferred through the doppler shift.

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