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Neutron Transfer Reactions with ^{126,128}Sn Rare Isotope Beams¹ B. MANNING, J.A. CIZEWSKI, Rutgers University, R.L. KOZUB, Tennessee Technological University, S.H. AHN, University of Tennessee, D.W. BARDAYAN, K.Y. CHAE, Oak Ridge National Laboratory, K.A. CHIPPS, Colorado School of Mines, M.E. HOWARD, Rutgers University, K.L. JONES, University of Tennessee, J.F. LIANG, Oak Ridge National Laboratory, M. MATOS, Louisiana State University, C.D. NESARAJA, Oak Ridge National Laboratory, P.D. O'MALLEY, Rutgers University, S.D. PAIN, Oak Ridge National Laboratory, W.A. PETERS, Oak Ridge Associated Universities, S.T. PITTMAN, Oak Ridge National Laboratory, A. RATKIEWICZ, Rutgers University, K.T. SCHMITT, University of Tennessee, D. SHAPIRA, M.S. SMITH, Oak Ridge National Laboratory — Neutron transfer reactions with ¹³²Sn beams have identified robust single-neutron excitations in ¹³³Sn above the N=82 shell closure. A similar pattern has been observed in 131 Sn, with potential implications for r-process abundances. To extend the systematics of singleneutron excitations in neutron-rich Sn nuclei, the (d,p) reactions has been studied with beams of ^{126,128}Sn. Measurements were performed at the HRIBF at ORNL with arrays of charged particle detectors including the Super ORRUBA highly-segmented silicon detector array. Preliminary results from these studies, and in comparison with measurements with stable ¹²⁴Sn and earlier ^{130,132}Sn beams will be presented.

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Brett Manning Rutgers University

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