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Neutron-knockout on beams of ^{106,108}Sn K.L. JONES, A. AYRES, A. BEY, C. BINGHAM, L. CARTEGNI, G. CERIZZA, R. GRZYWACZ, D. MILLER, S. PADGETT, University of Tennessee, T. BAUGHER, D. BAZIN, J. BERRYMAN, A. GADE, S. MCDANIEL, A. RATKIEWICZ, A. SHORE, R. STROBERG, D. WEISSHAAR, K. WIMMER, R. WINKLER, NSCL, A. CHAE, S. PAIN, ORNL, M.E. HOWARD, Rutgers University — Characterizing the nature of single-particle states outside of double shell closures is essential to a fundamental understanding of nuclear structure. This is especially true for those doubly magic nuclei lying far from stability that are much less studied and where the shell closures influence nucleosynthetic pathways. The region around ^{100}Sn is one of the most important due to the proximity of the N=Z=50 magic numbers, the proton drip-line, and the end of the rp-process. However, owing to low production rates, there is a lack of spectroscopic information and there are no firm J^{π} assignments for odd-mass tin isotopes lighter than ^{109}Sn. Single-neutron knockout experiments on beams of ^{106,108}Sn have been performed at the NSCL. The combination of γ ray measurements in CAESAR and momentum distributions from charged particles in the S800 allow the ground states of the beam particles and the final states of the residues to be characterized.

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