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Study of light tin isotopes via single-nucleon knockout reactions[1]

ANDREW AYRES, K.L. JONES, University of Tennessee, T. BAUGHER, D. BAZIN, J. BERRYMAN, NSCL, A. BEY, C. BINGHAM, L. CARTEGNI, G. CERIZZA, University of Tennessee, A. CHAE, Sungkyunkwan University/ORNL, A. GADE, NSCL, R. GRZYWACZ, University of Tennessee, M.E. HOWARD, Rutgers University, S. MCDANIEL, NSCL, D. MILLER, University of Tennessee/TRIUMF, S. PADGETT, University of Tennessee/LLNL, S. PAIN, ORNL, A. RATKIEWICZ, NSCL/Rutgers University, A. SHORE, R. STROBERG, D. WEISSHAAR, NSCL, K. WIMMER, NSCL/Central Michigan University, R. WINKLER, NSCL — Spectroscopic studies have been performed close to ^{100}Sn, utilizing the S800 and CAESAR at the NSCL. These studies make use of a single neutron knockout reaction on ^{108}Sn and ^{106}Sn beams. The momentum distributions of the resulting residues indicate the ℓ-value of the removed neutron and the spectroscopic factors for the even-mass nuclei. Additionally, γ-rays were measured in coincidence with the momentum distributions allowing the separation of the knockout channel where the residue is left in an excited state from the channel to the ground state. The odd-mass residue can then be characterized in terms of a hole in the d- or g- orbital with reference to the even-mass nucleus. The current status of the analysis will be presented.

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