

Abstract Submitted
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Extracting Spectroscopic Factors of Argon Isotopes from Transfer Reactions¹ JUAN MANFREDI, M.B. TSANG, W.G. LYNCH, K.W. BROWN, G. CERIZZA, J. BARNEY, J. ESTEE, C. LOELIUS, S. SWEANY, C. ANDERSON, H. SETIAWAN, Michigan State Univ, J. WINKELBAUER, K. SMITH, Los Alamos National Lab, J. LEE, Z. XU, Univ of Hong Kong, A. ROGERS, UMass-Lowell, C. PRUITT, Washington Univ, Z. CHAJECKI, G. CHEN, Western Michigan Univ, C. LANGER, Goethe Univ, Z. XIAO, Tsinghua Univ, Z. LI, C. NIU, Peking Univ — A spectroscopic factor (SF) quantifies the single particle structure of a given state in a nucleus. There is a discrepancy in extracted SF's between studies that use transfer reactions and those that use knockout reactions. Resolving this discrepancy is important both for understanding reaction probes as well as constraining nuclear structure theory. Kinematically complete measurements of the transfer reactions $^{34}\text{Ar}(p,d)$ and $^{46}\text{Ar}(p,d)$ were performed at the National Superconducting Cyclotron Laboratory. The same beam energy (70 MeV/u) was used as in a previous knockout measurement to account for energy dependence in the relevant optical potentials. Preliminary results will be presented. In addition, findings from measurement of the two-neutron transfer reactions $^{34}\text{Ar}(p,t)$ and $^{46}\text{Ar}(p,t)$ will be discussed.

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