Abstract Submitted for the DNP17 Meeting of The American Physical Society

Inverse-kinematics proton scattering from  ${}^{43}\mathbf{P}^{1}$  L.M. SKILES, S.D. GREGORY, E.B. HALDEMAN, B.R. KLYBOR, L.A. RILEY, Department of Physics and Astronomy, Ursinus College, P.D. COTTLE, K.W. KEMPER, Department of Physics, Florida State University, D. BAZIN, J. BELARGE, P.C. BENDER, B. ELMAN, A. GADE, S. LIPSCHUTZ, B. LONGFELLOW, E. LUNDERBERG, T. MIJATOVIC, J. PEREIRA, R. TITUS, D. WEISSHAAR, J.C. ZAMORA, R.G.T. ZEGERS, National Superconducting Cyclotron Laboratory, Michigan State University — Following an experiment at the National Superconducting Cyclotron Laboratory at Michigan State University (NSCL) in October 2016, we study the excited states of the neutron-rich N = 28 isotope  ${}^{43}$ P via inverse-kinematic proton scattering with the GRETINA gamma-ray tracking array and the NSCL/Ursinus College liquid hydrogen target. We discuss preliminary analysis and results, including measured cross sections for populating excited states of  ${}^{43}$ P.

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Lisa Skiles Department of Physics and Astronomy, Ursinus College

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