

Abstract Submitted
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Knockout reactions on p-shell nuclei for tests of structure and reaction models¹ A.N. KUCHERA, D. BAZIN, NSCL, M. BABO, GANIL, T. BAUMANN, M. BOWRY, J. BRADT, NSCL, J. BROWN, Wabash College, P.A. DEYOUNG, Hope College, B. ELMAN, NSCL, J.E. FINCK, Central Michigan University, A. GADE, NSCL, G.F. GRINYER, GANIL, M.D. JONES, E. LUNDERBERG, T. REDPATH, NSCL, W.F. ROGERS, Westmont College, K. STIEFEL, M. THOENNESSEN, D. WEISSHAAR, K. WHITMORE, NSCL — A series of knockout reactions on p-shell nuclei were studied to extract exclusive cross sections and to investigate the neutron knockout mechanism. The measured cross sections provide stringent tests of shell model and ab initio calculations while measurements of neutron+residual coincidences test the accuracy and validity of reaction models used to predict cross sections. Six different beams ranging from A=7 to 12 were produced at the NSCL totaling measurements of nine different reaction settings. The reaction settings were determined by the magnetic field of the Sweeper magnet which bends the residues into charged particle detectors. The reaction target was surrounded by the high efficiency CsI array, CAESAR, to tag gamma rays for cross section measurements of low-lying excited states. Additionally, knocked out neutrons were detected with MoNA-LISA in coincidence with the charged residuals. Preliminary results will be discussed.

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