

Abstract Submitted
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Spectroscopy of ^{12}Be using the (^7Li , ^7Be) reaction in inverse kinematics¹ RHIANNON MEHARCHAND, SAM M. AUSTIN, T. BAUGHER, D. BAZIN, B.A. BROWN, J. DEAVEN, A. GADE, G.F. GRINYER, C.J. GUESS, H. IWASAKI, S. MCDANIEL, K. MEIERBACHTOL, G. PERDIKAKIS, J. PEREIRA, A.M. PRINKE, A. RATKIEWICZ, A.J. SIGNORACCI, S. STROBERG, L. UHER, P. VOSS, K.A. WALSH, D. WEISSHAAR, R. WINKLER, R.G.T. ZEGERS, NSCL/MSU, M.E. HOWARD, Rutgers University — Charge-exchange reactions have been used extensively in forward kinematics to probe the spin-isospin response of stable nuclei. By exploiting a simple proportionality between the differential cross section and Gamow-Teller strength ($B(\text{GT})$), one can extract detailed structure information in a model-independent way. This information provides stringent tests of theoretical models. The charge-exchange group at NSCL has developed a technique to expand these tests to exotic nuclei, using the (^7Li , ^7Be) reaction in inverse kinematics. The $^{12}\text{B}(^7\text{Li}, ^7\text{Be})$ reaction has been employed to study the structure of ^{12}Be , to elucidate the breakdown of the $N=8$ shell closure and demonstrate the merit of this new experimental technique. Experimental details and preliminary results are presented.

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