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Measurements of Gamma Rays from ^7Be Inelastic Scattering[1] S.L. HENDERSON, T. AHN, J. ALLEN, D.W. BARDAYAN, M.A. CAPRIO, CH. CONSTANTINOU, P. FASANO, B. FRENTZ, M. HALL, L. JENSEN, J.J. KOLATA, X. LI, A.E. MCCOY, S. MOYLAN, P. O'MALLEY, C.S. RE, University of Notre Dame, J. RIGGINS, University of Michigan, A. SIMON, University of Notre Dame, R. TORRES-ISEA, University of Michigan, S. STRAUSS, University of Notre Dame
— Ab-initio methods have been successful in describing the structure of light nuclei using realistic nucleon-nucleon interactions, but more experimental data is needed in the light unstable nuclei region. No-core configuration interaction calculations have made predictions for the M1 and a lower limit for the E2 electromagnetic transition strengths of the decay of the first excited state of ^7Be where the latter has never before been measured. To measure the E2 transition strength, a Coulomb Excitation experiment was performed using TwinSol at the University of Notre Dame. A beam of ^7Be ions were scattered off a gold target, and gamma rays from inelastically scattered ions were detected using clover Ge detectors. Preliminary results for the E2 transition strength and its comparison to the no-core configuration interaction approach will be shown. Extensions of this experimental method to other light unstable nuclei will be discussed.

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