Abstract Submitted
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Study of ^{68}Co low-energy structure via β decay[1] B.P. CRIDER, C.J. PROKOP, S.N. LIDDICK, J. CHEN, A.C. DOMBOS, N.R. LARSON, R. LEWIS, S.J. QUINN, A. SPYROU, NSCL/MSU, A.D. AYANGEAKAA, M.P. CARPENTER, H.M. DAVID, R.V.F. JANSSENS, T. LAURITSEN, D. SEWERYNIAK, S. ZHU, ANL, M. AL-SHUDIFAT, S. GO, R. GRZYWACZ, UTK, J. HARKER, UMD/ANL, W.B. WALTERS, UMD, J.J. CARROLL, ARL, C.J. CHIARA, ARL/ORAU, F. RECCHIA, UNIPD, S. SUCHYTA, LBL — The fragility of the $N = 40$ subshell closure in neutron-rich nuclei is highlighted by the sudden onset of collectivity as protons are removed from the $\pi f_{7/2}$ single-particle state and has been attributed to shape coexistence between spherical and prolate-deformed configurations. A recent study of ^{68}Co at NSCL concluded that the lowest-energy populated state was attributed to a deformed configuration, further extending the presence of shape coexistence to this nucleus. This work reports on ^{68}Co from a β-decay experiment at NSCL utilizing the β decay from ^{68}Fe to populate low-spin states of ^{68}Co. Coupling large statistics and half-life measurement capabilities, an expanded description of ^{68}Co will be presented.

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