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Complimentary Approaches to the Study of T=2 30Al T.A. HINNERS, VANDANA TRIPATHI, S.L. TABOR, P.C. BENDER, Florida State University, C.R. HOFFMAN, Flordia State University, S. LEE, M. PERRY, Florida State University, M. WIEDEKING, Florida State Unversity, P.F. MANTICA, A.D. DAVIES, S.N. LIDDICK, W.F. MUELLER, A. STOLZ, B.E. TOMLIN, NSCL —
Excited states in ^{30}Al were populated through the ^{14}C(^{18}O, pnγ)^{30}Al fusion evaporation reaction at an energy of 22 MeV at Florida State University. In addtion, ^{30}Al was studied by the β-decay of ^{30}Mg produced by the intermediate energy projectile fragmentation of ^{48}Ca beam at 140 MeV/nucleon on ^{9}Be at the National Superconducting Cyclotron Laboratory (NSCL) at Michigan State University. Through the β-decay results, the half-life of the parent nucleus, ^{30}Mg, was found to be 315 $\pm$ 6 ms which is in good agreement with previous results. Also, the previously known low-lying γ transitions were observed. In addtion, two new lines were observed leading to a new 1^+ state. The in-beam analysis yielded many new states that appear to have relatively high-spin ($\geq 4^+$). Results, thus far, from both experiments are in good agreement with each other, shell model predictions, and previous work. This work was supported in part by the National Science Foundation.

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