

Abstract Submitted
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Beta Decay Studies of Neutron-Rich Nuclei near ^{52}Ca ¹ H.L. CRAWFORD, P.F. MANTICA, G.F. GRINYER, K. MINAMISONO, J.S. PINTER, J.B. STOKER, NSCL/MSU, R.V.F. JANSSENS, M. CARPENTER, B. KAY, T. LAURITSEN, S. ZHU, Argonne National Laboratory, R. BRODA, B. FORNAL, Institute of Nuclear Physics, Polish Academy of Sciences, N. HOTELING, I. STEFANESCU, Argonne National Laboratory/U. of Maryland, W.B. WALTERS, U. of Maryland — The β decay and isomeric properties of neutron-rich nuclei near semi-magic ^{52}Ca were studied at NSCL. The presence of a significant energy gap, separating the neutron $f_{5/2}$ and $p_{1/2}$ single-particle states from the $p_{3/2}$ level at $N=32$, has a stabilizing effect on the low-energy structure of nuclides in this region. We report the results for the low-energy structure of ^{50}K , which has one proton hole and one neutron hole outside ^{52}Ca , determined from isomeric decay. We also discuss new levels in ^{53}Sc , one proton outside ^{52}Ca , populated following the β decay of ^{53}Ca . Both findings reinforce previous evidence for the doubly-magic character of the ^{52}Ca core.

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Heather Crawford
NSCL/MSU

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