

Abstract Submitted
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Search for isomers in ^{254}Rf ¹ J. CHEN, F.G. KONDEV, D. SEWERYNIAK, M.P. CARPENTER, M. ALBERS, M. ALCORTA, P. BERTONE, C.J. CHIARA, J.P. GREENE, C.R. HOFFMAN, R.V.F. JANSSENS, T.L. KHOO, T. LAURITSEN, C. NAIR, A. ROGERS, G. SAVARD, S. ZHU, Argonne National Laboratory, H. DAVID, D. DOHERTY, University of Edinburgh, P. GREENLEES, J. KONKI, S. STOLZE, University of Jyväskylä, K. HAUSCHILD, CSNSM, D.J. HARTLEY, U.S. Naval Academy, S.S. HOTA, University of Massachusetts Lowell — We have searched for predicted two- and four-quasiparticle isomers in ^{254}Rf using the $^{50}\text{Ti} + ^{206}\text{Pb}$ heavy-ion fusion-evaporation reaction and the Argonne Fragment Mass Analyzer (FMA). The beam was produced by the ATLAS accelerator with an energy of 242.5 MeV and an intensity of ~ 200 pnA. The recoiling reaction products were separated by the FMA, identified by their m/q ratio using a Parallel Grid Avalanche Counter detector and implanted into a 160-by-160-strip Double-sided Silicon Strip Detector at the FMA focal plane where correlations between implants and their subsequent decays were established. The results of the experiment will be presented including the observation of spontaneous fission events correlated with mass 254 implants.

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