Abstract Submitted
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Alpha Decay of Proton-Rich ^{112}Cs and ^{111}Xe LUCIA CARTEGNI, University of Tennessee, CHIARA MAZZOCCHI, University of Milano and INFN, ROBERT GRZYWACZ, University of Tennessee and ORNL, IAIN DARBY, SEAN LIDDICK, University of Tennessee, KRZYSZTOF RYKACZEWSKI, ORNL, JON BATCHELDER, UNIRIB, LAURA BIANCO, University of Liverpool, CARROL BINGHAM, University of Tennessee and ORNL, ELTON FREEMAN, University of Tennessee, CHRISTOPHER GOODIN, Vanderbilt University, CARL GROSS, ORNL, ALESSANDRA GUGLIELMETTI, University of Milano and INFN, DAVID JOSS, University of Liverpool, SHAOHUA LIU, Vanderbilt University, MARCO MAZZOCCO, University of Padova and INFN, STEPHEN PADGETT, University of Tennessee, ROBERT PAGE, University of Liverpool, MUSTAFA RAJABALI, University of Tennessee, MAURO ROMOLI, INFN Napoli, PAUL SAPPLE, JAMES THOMSON, HEIDI WATKINS, University of Liverpool — We have performed an experiment at the Holifield Radioactive Ion Beam Facility (Oak Ridge National Laboratory) in an attempt to detect a weak alpha branch in the decay of proton emitter ^{112}Cs. The ions produced in the fusion-evaporation reaction ^{58}Ni(^{58}Ni,p3n)^{112}Cs were separated in the Recoil Mass Spectrometer and implanted in a double sided silicon strip detector. We were able to establish an upper limit on the alpha branching ratio of ^{112}Cs, and to measure the alpha branching ratio of ^{111}Xe. This work was supported under US DOE grants DE-AC05-00OR22725, DE-FG02-96ER40983, and in part by the NNSA through DOE Cooperative Agreement DE-FC03-03NA00143, the UNIRIB Consortium and the UK STFC.

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