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Alpha decay of 112and 111Xe LUCIA CARTEGNI, Univ. Tennessee, C. MAZZOCCHI, Univ. Milan, INFN, R. GRZYWACZ, Univ. Tennessee, ORNL, I.G. DARBY, S.N. LIDDICK, Univ. Tennessee, K.P. RYKACZEWSKI, ORNL, J.C. BATCHELDER, UNIRIB, ORNL, L. BIANCO, Univ. Liverpool, C.R. BINGHAM, Univ. Tennessee, ORNL, E. FREEMAN, Univ. Tennessee, C. GOODIN, Vanderbilt Univ., C.J. GROSS, ORNL, A. GUGLIELMETTI, Univ. Milan, INFN, D.T. JOSS, Univ. Liverpool, S. LIU, Vanderbilt Univ., M. MAZZOCCO, Univ. Padua, INFN, S. PADGETT, Univ. Tennessee, R.D. PAGE, Univ. Liverpool, M.M. RAJABALI, Univ. Tennessee, M. ROMOLI, INFN Napoli, P. SAPPLE, J. THOMSON, H. WATKINS, Univ. Liverpool — Decay measurements of proton-rich nuclei can be useful to determine the mass of nuclei far from stability, test theoretical predictions for nucleon separation energies, and supply experimental data for simulation of astrophysical nucleosynthesis processes. We performed an experiment at the Holifield Radioactive Ion Beam Facility at ORNL to search for the alpha decay of 112Cs, a known proton emitter. The ions produced in the reaction 58Ni(58Ni,p3n)112Cs, separated through a Recoil Mass Spectrometer, were implanted in a double-sided silicon strip detector. We were able to establish an upper limit on the alpha branching ratio of 112Cs, and to measure the alpha branching ratio of 111Xe, while observing its fine structure. Results will be presented.

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