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Properties of Proton-Emitting ^{72,73}Rb Isotopes[1] D.E.M. HOFF, UMass Lowell (UML), A.M. ROGERS, UML, S.M. WANG, National Superconducting Cyclotron Laboratory (NSCL), P.C. BENDER, UML, K. BRANDENBURG, Ohio University (OU), K. CHILDERS, NSCL, J. CLARK, Argonne National Laboratory, A.C. DOMBOS, NSCL, E.R. DOUCET, UML, S. JIN, R. LEWIS, S.N. LIDDICK, NSCL, C.J. LISTER, UML, Z. MEISEL, OU, C.M. MORSE, UML, W. NAZAREWICZ, H. SCHATZ, K. SCHMIDT, NSCL, D. SOLTESZ, S.K. SUBEDI, OU, S. WANIGANETHTHI, UML — Properties of proton-emitting nuclei at the limits of nuclear binding, along the proton dripline, impact the rapid proton-capture (rp) process and can reveal interesting nuclear structure. β-delayed protons emitted from ^{73}Sr, produced by the fragmentation of a ^{92}Mo primary beam on a Be target, were measured via ion implantation-decay correlations at the NSCL using the Beta-Counting Station (BCS), providing a direct measurement of the ^{73}Sr lifetime. Low-energy protons were observed that are consistent with transistions from ^{73}Rb(g.s.) to ^{72}Kr(g.s.), and the resulting proton separation energy of ^{73}Rb was determined by a Bayesian analysis of the data. A substantial amount of ^{72}Rb was also observed allowing for a limit to be placed on the fragmentation cross section.

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