Abstract Submitted
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Shape coexistence in ^{74}Rb explored via 2_1^+ state lifetime measurement C. MORSE, H. IWASAKI, NSCL/MSU, A. LEMASSON, GANIL, A. DEWALD, T. BRAUNROTH, IKP Cologne, D. BAZIN, NSCL, V.M. BADER, T. BAUGHER, NSCL/MSU, J.S. BERRYMAN, NSCL, C.M. CAMPBELL, LBNL, A. GADE, NSCL/MSU, C. LANGER, NSCL, I.Y. LEE, LBNL, C. LOELIUS, E. LUNDERBERG, NSCL/MSU, F. RECCHIA, D. SMALLEY, NSCL, S.R. STROBERG, NSCL/MSU, R. WADSWORTH, University of York, C. WALZ, D. WEISSHAAR, NSCL, A. WESTERBERG, CMU, K. WHITMORE, NSCL/MSU, K. WIMMER, CMU — The self-conjugate nucleus ^{74}Rb lies in a region of the nuclear chart which is well-known to harbor many intriguing nuclear structure phenomena. The nature of the collectivity in this region changes rapidly, with E2 strengths known to show sudden increases with a small increase in mass along the N=Z line. Shape coexistence is also a well-known feature of this mass region, especially in the Kr isotopes. Shape coexistence therefore may also persist in ^{74}Rb, with N = Z = 37, as it does in the isobaric analogue states of ^{74}Kr. To investigate these phenomena, the lifetime of the first 2^+ state in ^{74}Rb has been measured using the NSCL TRIPLEX plunger and GRETINA. Results of the measurement will be presented and the implications for the structure of ^{74}Rb will be discussed.

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