Abstract Submitted
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Inverse kinematics RDDS lifetime measurements: ^{82}**Se**[1] E.T. HOLLAND, V. WERNER, J.R. TERRY, R. WINKLER, R.J. CASPERSON, A. HEINZ, J. QIAN, E. WILLIAMS, WNSL, Yale University, P.H. REGAN, Univ. Surrey, UK, E.A. MCCUTCHAN, WNSL/Argonne, B. SHORAKA, WNSL/Surrey, R. LÜTTKE, WNSL/TU Darmstadt, Germany, C.W. BEAUSANG, J.M. ALLMOND, Univ. Richmond, D.A. MEYER, J. LEBLANC, Rhodes College — A new method for inverse kinematics lifetime measurements was introduced at WNSL. A heavy beam is Coulomb excited on a light target and subsequently stopped in a second foil, chosen so the forward scattered light nuclei can trespass the stopper and be detected by a Si detector. A particle-gamma coincidence requirement minimizes background, and fixes the quantization axis. Lifetimes are determined independent from the Coulomb excitation mechanism, and the measurement of attenuated angular distributions shall be used in future g factor measurements. ^{82}Se is situated two neutrons below the N=50 shell closure. This allows to study the interplay between collective and single-particle degrees of freedom. We used a ^{82}Se beam incident on a C target for lifetime measurements of high-lying excited states at a beam energy $\sim$25% above the Coulomb barrier. The new RDDS method will be introduced, and first results on ^{82}Se will be presented.

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Eric Holland
WNSL, Yale University

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