

Abstract Submitted
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^{17}C Lifetime Measurements with the TRIPLEX Plunger and GRETINA DUANE SMALLEY, NSCL, H. IWASAKI, K. WHITMORE, C. MORSE, C. LOELIUS, A. GADE, NSCL/MSU, D. WEISSHAAR, D. BAZIN, NSCL, C. LANGER, NSCL/MSU, F. RECCHIA, J. BERRYMAN, V. BADER, NSCL, S.R. STROBERG, NSCL/MSU, C. CAMPBELL, P. FALLON, A. MACCHIAVELLI, LBNL, K. WIMMER, CMU, A. LEMASSON, GANIL, J. PARKER, FSU — As nuclei approach the drip-line exotic features such as deformation and collectivity begin to manifest. Experimental observation of these features provide valuable inputs to test the validity of current theoretical models. Excited state lifetime measurements can be linked directly to the reduced transition probability allowing the inference of structure information. Recent lifetime measurements of the neutron rich ^{17}C have been performed using the gamma-ray tracking array GRETINA and the newly designed TRIPLEX plunger at the NSCL. The TRIPLEX plunger allows multiple lifetimes, ranging from 1ps to 1ns, to be measured with a single setting. This provides a robust model independent methodology for determining excited state lifetimes through in-beam gamma-ray spectroscopy. Initial results of the lifetime measurements and the data analysis will be presented.

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