Abstract Submitted
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Excited state lifetimes in 109Ru, 109Pd as a probe for structure in the neutron-rich A-100 region[1] M.K. SMITH, B. BUCHER, A. APRAHAMIAN, Univ. of Notre Dame, H. MACH, Univ. of Notre Dame, Uppsala Univ., G. SIMPSON, LPSC, Grenoble, J. RISSANEN, J. AYSTO, T. ERONEN, D. GHITA, P. KARVONEN, A. JOKINEN, I.D. MOORE, H. PENTTILA, M. REPONEN, C. WEBER, A. SAASTOMOINEN, Univ. of Jyvaskyla, W. KURCEWICZ, Univ. of Warsaw, I.M. FRAILE, B. OLAIZOLA, Univ. Complutense Madrid, E. RUCHOWSKA, Soltan Inst. for Nuclear Studies — The evolution of structure in neutron-rich nuclei can occur quite rapidly. In the A=110 region, the onset of deformation is not well-characterized, and signatures such as triaxial deformations, shape coexistence and oblate configurations have been reported within a small window of the nuclear landscape. We have investigated the A=109 β-decay chain from the fission of 238U at the Univ. of Jyvaskyla IGISOL facility. Level lifetimes and gamma-ray transitions were measured with a multi-detector array of 1 NE111A plastic, 2 HPGe, and 2 LaBr3 detectors. Events recorded in β-γ-γ triple coincidence were used to construct/check level schemes and extract level lifetimes via the fast-timing method pioneered by H. Mach. Results will be presented on the low energy structure of 109Ru, in context to the A=109 decay chain including 109Tc and 109Pd. In each, new levels, transitions and lifetimes are measured for the first time

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