Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

Excited state lifetimes in 190Tc and 109Ru via the fast-timing method[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. PENTILLA, M. REPONEN, C. WEBER, A. SAASTAMOINEN, Univ. of Jyvaskyla, W. KURCEWICZ, Univ. of Warsaw, I.M. FRAILE, B. OLAIZOLA, Universidad Complutenese Madrid, E. RUCHOWSKA, Soltan Institute for Nuclear Studies — The evolution of nuclear structure across isotopic and isobaric chains are of great interest to nuclear structure and for structure applications to nuclear astrophysics, specifically the r-process. The neutron-rich region around A=110 is characterized by rapidly evolving structure, which is currently not completely understood. As such, we have investigated the A=109 β-decay chain at the Univ. of Jyvaskyla IGISOL facility. ^{109}Mo was populated via proton-induced fission of ^{238}U, which β- decays to ^{109}Tc and subsequently ^{109}Ru. Lifetimes and gamma spectroscopy were measured with a multi-detector array consisting of of 2 HPGe, 2 LaBr and 1 plastic scintillator. β-γ-γ triple coincidences were used to construct/check both level schemes, and measure lifetimes by the fast-timing method. New gamma ray transitions and picosecond range lifetimes will be presented for ^{109}Tc and ^{109}Ru.

[1]This work is supported by the NSF under grants PHY0822648 and PHY0758100; and by the Academy of Finland under the Centre of Excellence Programme 2006-2011.

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Date submitted: 01 Jul 2013 Electronic form version 1.4