

Abstract Submitted
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Excited State Lifetime Measurements in ^{96}Mo using the GRID Method.¹ A. SCHMIDT, V. WERNER, WNSL, Yale University, J. JOLIE, IKP, Universitat zu Koeln, Germany, H. BORNER, M. JENTSCHHEL, P. MUTTI, ILL, Grenoble, France — The Gamma-Ray Induced Doppler-broadening (GRID) [1] method was used to find lifetimes of excited states in ^{96}Mo . A Mo target was placed close to the reactor core. Energies of gamma-rays emitted after neutron capture (n, gamma) were detected with ultra-high resolution using the double diffractometer GAMS- 4. By analyzing the Doppler-broadening of the spectral peaks of interest, lifetimes in the order of 100 fs to a few ps were determined. The short lifetime of the 2095 keV state, in the order of 100 fs, as well as its energy, make it the best candidate for the mixed-symmetric one-phonon state, which has been observed at similar energy in ^{94}Mo . [1] H. G. Borner and J. Jolie, J. Phys. G 19, 217 (1993)

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