

Abstract Submitted
for the DNP10 Meeting of
The American Physical Society

Precise Lifetime Measurements in ^{98}Ru using Inverse Coulomb Excitation D. RADECK, WNSL, Yale University / IKP Cologne, Germany, V. WERNER, G. ILIE, T. AHN, R. CASPERSON, A. HEINZ, E. WILLIAMS, M. SMITH, WNSL, L. BETTERMANN, WNSL / IKP Cologne, Germany, R. CHEVRIER, WNSL / University of Caen Basse Normandie, France, D. MCCARTHY, V. ANAGNOSTATOU, WNSL/ University of Surrey, UK — The mass region $A \approx 90-100$ is of great interest in the study of the evolution of proton-neutron collectivity from spherical to deformed nuclei. Controversial publications concerning the vibrational character of ^{98}Ru can be found in literature [1,2]. To get a comprehensive understanding of the structure, absolute transition strengths are important. With large uncertainties in essential quantities like the $B_{4/2}$ value, theoretical interpretations remain difficult. In order to reduce uncertainties, the RDDS method using inverse Coulomb excitation was used to measure lifetimes. This technique, combined with the selective reaction, yields high precision lifetimes but several corrections are required due to relativistic and deorientation effects. Analysis techniques and results will be presented. New results on the absolute transition strengths are compared to known data on other nuclei in the mass region. [1] B. Cakirli et al., PRC 70, 044312 (2004). [2] E. Williams et al., PRC 74, 024302 (2006). This work was supported by the US DOE grant no. DE-FG02-91ER-40609 and D.R. thanks for financial support by the German Academic Exchange Service (DAAD).

Desiree Radeck
WNSL, Yale University / IKP Cologne, Germany

Date submitted: 01 Jul 2010

Electronic form version 1.4