

Abstract Submitted
for the DNP08 Meeting of
The American Physical Society

What can ($^3\text{He},d$) tell us about the structure of $^{186,188}\text{Os}$ ¹ A.A. PHILLIPS, P.E. GARRETT, G.A. DEMAND, P. FINLAY, K.L. GREEN, K.G. LEACH, M.A. SCHUMAKER, C.E. SVENSSON, J. WONG, University of Guelph, R. HERTENBERGER, Ludwig-Maximilians-Universität München, T. FAESTERMANN, R. KRÜCKEN, H.-F. WIRTH, Technische Universität München, L. BETTERMANN, N. BRAUN, Universität zu Köln, D.G. BURKE, McMaster University — The structure of Os nuclei are of interest for a number of reasons including a debate over the vibrational nature of the $K^\pi=4^+$ bands, and a shape transition from well-deformed prolate to γ -soft oblate as the number of neutrons increases. In order to investigate the structure of $^{186,188}\text{Os}$, we have performed a ($^3\text{He},d$) reaction on targets of $^{185,187}\text{Re}$. The 30 MeV ^3He beams were obtained from the LMU/TUM Tandem Accelerator facility, and the Q3D spectrometer was used to analyze deuterons with 13 keV energy resolution. The absolute cross sections were measured at 9 angles from 5° to 50° up to ~ 3 MeV in excitation energy. Fingerprint patterns are used to identify orbitals coupled to the $5/2^+[402]_\pi$ target configuration.

¹Supported in part by the National Sciences and Engineering Research Council of Canada.

A.A. Phillips
University of Guelph

Date submitted: 30 Jun 2008

Electronic form version 1.4