Abstract Submitted for the DNP07 Meeting of The American Physical Society

Structure of the 4_3^+ States in ^{186,188}Os A.A. PHILLIPS, P.E. GAR-RETT, G.A. DEMAND, P. FINLAY, K.L. GREEN, K.G. LEACH, M.A. SCHU-MAKER, C.E. SVENSSON, J. WONG, University of Guelph, R. HERTEN-BERGER, Ludwig-Maximilians-Universität München, T. FAESTERMANN, R. KRUCKEN, H.-F. WIRTH, Technische Universität München, L. BETTERMANN, N. BRAUN, Universität zu Köln, D.G. BURKE, McMaster University — The structures of 4^+_3 states in the Os nuclei have been the subject of debate for the past several decades. Based on measured B(E2) values, they were interpreted in $^{186-192}Os$ as $K^{\pi}=4^+$ two-phonon γ vibrations, whereas inelastic scattering results, and singleproton transfer (d,³He) and (t, α) imply a hexadecapole phonon description. Uncertainties in the (t,α) reaction mechanism, however, were cited as preventing a firm conclusion based on those data. To help clarify the nature of these $K^{\pi}=4^+$ bands, we have performed a (³He,d) stripping reaction on targets of ^{185,187}Re using 30 MeV ³He beams provided by the MP-tandem facility of the LMU/TUM in Garching. With an energy resolution of 13 keV, the deuterons were analyzed at 9 angles ranging from 5° to 50° with the Q3D spectrograph, and absolute cross sections were obtained for levels up to 3 MeV in excitation energy. Preliminary results will be presented.

> A.A. Phillips University of Guelph

Date submitted: 02 Jul 2007

Electronic form version 1.4