

Abstract Submitted  
for the HAW05 Meeting of  
The American Physical Society

**Re-interpretation of the structure of  $^{184}\text{Pt}$**  R.B. CAKIRLI, Yale, Istanbul, E.A. MCCUTCHAN, R.F. CASTEN, H. AI, Yale, C.R. FITZPATRICK, Yale, Surrey, G. GURDAL, Yale, Clark, A. HEINZ, J. QIAN, R. WINKLER, Yale — The traditional interpretation of the light Pb, Hg and Pt isotopes invokes the concept of proton intruder states from above the  $Z=82$  shell gap. However, recently, a single configuration IBA-1 Hamiltonian was used to test this interpretation of the light Pt isotopes [1]. Without any need for intruder states, these results showed excellent agreement in both energies and  $B(E2)$  values. Among these Pt isotopes,  $^{184}\text{Pt}$  lacks sufficient data on relative  $B(E2)$  values. Therefore, to obtain further information on this nucleus, we carried out a  $\beta$ -decay experiment at the Yale Moving Tape Collector at WNSL using the  $^{175}\text{Lu} (^{16}\text{O},7n)$  reaction at 132MeV. After producing parent  $^{184}\text{Au}$ , we observed transitions in  $^{184}\text{Pt}$  particularly those from low-spin non-yrast states were observed using clover detectors from YRAST Ball. The results of this work will be discussed. This work was supported by US DOE Grant No.DE-FG02-91ER-40609

[1] E.A. McCutchan, R.F. Casten, and N.V. Zamfir, Phys.Rev.C (in press).

R. Burcu Cakirli  
Yale University, Istanbul University

Date submitted: 26 May 2005

Electronic form version 1.4