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Investigating the B(E2) anomaly in ^{144}Nd by relative Coulomb excitation C.R. FITZPATRICK, WNSL, Yale University and University of Surrey, UK, V. WERNER, R.F. CASTEN, H. AI, R.B. CAKIRLI, A. HEINZ, E.A. MCCUTCHAN, D.A. MEYER, J. QIAN, E. WILLIAMS, R. WINKLER, WNSL, Yale University, G. GÜRDAL, WNSL, Yale University and Clark University — Previous work has shown that for a few non-magic nuclei, $B_{4/2} = B(E2; 4_1^+ \rightarrow 2_1^+)/B(E2; 2_1^+ \rightarrow 0_1^+)$ is less than one; this is anomalous in the context of collective models. ^{144}Nd is a non-magic nucleus with a particularly low $B_{4/2}$ (0.73 ± 0.09) and as such merits further investigation. A Coulomb excitation experiment was carried out using the 20MV Tandem Van de Graff accelerator at Yale using ^{48}Ti ions in the range 170-202 MeV on two composite targets: one a mix of ^{142}Nd and ^{144}Nd, the other a layered target of ^{148}Sm and ^{144}Nd. These data facilitate a relative measurement of $B_{4/2}$ for ^{144}Nd, and also provide a check that the data in this region is self-consistent. Data analysis is in progress; results of this work will be presented. Work supported by US DOE grants DE-FG02-91ER-40609, DE-FG02- 88ER40417 and DE-FG03-03NA00081.

C.R. Fitzpatrick
WNSL, Yale University and University of Surrey, UK

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