Abstract Submitted
for the DNP11 Meeting of
The American Physical Society

Measuring g factors of 4_1^+ and 6_1^+ states in even-even nuclei with 80<A<100[1] DIEGO TORRES, N. BENCZER-KOLLER, G. KUMBARTZKI, G. GÜRDAL, Y.Y. SHARON, L. ZAMICK, Rutgers University, K.-H. SPEIDEL, Bonn University, Germany, G. ILIE, A. HEINZ, T. AHN, V. WERNER, Yale University, S.J.Q. ROBINSON, Millsaps College — The measurement of g factors of the low lying excited states in even-even nuclei with lifetimes of the order of 1 to 50 picoseconds presents challenging questions for both theory and experiment. The experimental determination of accurate g factor values uses the transient field technique in inverse kinematics and requires an understanding of the reaction mechanism used to populate the final states. So far, the main method of excitation has been Coulomb excitation. More recently, alpha transfer from a ^{12}C target to selected beams made it possible to populate states in nuclei not available as stable beams. This method has been successful for lighter nuclei up to A$\sim$70 [1]. A comparison between Coulomb excitation and alpha transfer reactions will be presented. The experiments used the Tandem at the Wright Nuclear Structure Laboratory at Yale University. Preliminary results for the ^{100}Pd, ^{96}Ru and ^{86}Sr nuclei will be presented. Experimental challenges for future experiments will be discussed.

[1] J. Leske, *et al.*, Phys. Rev. C**71**, 044316, (2005).

[1]Supported in part by the DOE and the NSF.

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Date submitted: 30 Jun 2011 Electronic form version 1.4