Abstract Submitted for the DNP06 Meeting of The American Physical Society

First Experimental Value of a mixed-symmetry G Factor: ⁹⁴Zr M. PERRY, WNSL Yale Univ., FSU, V. WERNER, WNSL, P. BOUTACHKOV, E. STEFANOVA, N. BENCZER-KOLLER, G. KUMBARTZKI, Rutgers Univ., N. PIETRALLA, IKP, Univ at Köln, Germany, H. AI, R.F. CASTEN, A. HEINZ, E.A. MCCUTCHAN, D.A. MEYERS, J. QIAN, E. WILLIAMS, R. WINKLER, WNSL, M. CHAMBERLAIN, C.R. FITZPATICK, A.B. GARNSWORTHY, N.J. THOMPSON, WNSL, Univ. of Surrey, UK, R.B. CAKIRLI, WNSL, Istanbul Univ, Turkey, X. LIANG, WNSL, Univ of Paisley, UK, P. MAIER-KOMOR, TU, Munich, Germany, G. GURDAL, WNSL, Clark Univ, A.E. STUCHBERY, ANV, Australia, K.-H. SPEIDEL, ISKP, Bonn Univ, Germany — Zr isotopes have the characteristic of a neutron(n)-dominated and a proton(p)-dominated 2^+ state, resembling the building blocks of collective quadrupole excited states, i.e. one-phonon pn symmetric and mixed-symmetric 2^+ states. The pn configuration mixing in these states can be tested by measuring their g factors. The g factors predicted by different models vary due to the characterization of the symmetry breaking. The g factor of a mixed symmetric state has been measured for the first time in ⁹⁴Zr using the transient magnetic field technique at WNSL. The result, proving dominant p character in the 2^+_2 state, will be presented and compared with theory. Work supported by USDOE under contracts DE-FG02-91ER-40609, DE-FG52-05NA25929, and DE-FG02-88ER40417 and th US NSF.

> Michelle Perry Florida State University

Date submitted: 05 Jul 2006

Electronic form version 1.4