Abstract Submitted
for the HAW05 Meeting of
The American Physical Society

Magnetic moment of a mixed-symmetry state of Zr nuclei V. WERNER, WNSL, Yale University, N. PIETRALLA, Stony Brook, SUNY, N. BENCZER-KOLLER, G. KUMBARTZKI, E. STEFANOVA, Rutgers University, C. FRANSEN, P. VON BRENTANO, Universität zu Köln, Germany, H. AI, R.F. CASTEN, A. HEINZ, E.A. MCCUTCHAN, D.A. MEYER, J. QIAN, E. WILLIAMS, R. WINKLER, WNSL, Yale University, R.B. CAKIRLI, WNSL and Istanbul University, Turkey, C.R. FITZPATRICK, WNSL and University of Surrey, UK, G. GÜRDAL, WNSL and Clark University — Mixed-symmetric states are quadrupole collective states with anti-symmetric parts in their pn wave function. Breaking of the proton-neutron (pn) symmetry was discussed for ^{92}Zr within the IBM-2, the shell model (SM), and the quasiparticle phonon model (QPM). The models differ in quantifying the pn symmetry breaking, which leads to substantial differences in the predictions for the g factor of the one-phonon $2^+_{1,\mathrm{ms}}$ state with predominantly mixed-symmetry character. The g factor of this state is difficult to measure due to its short lifetime. First measurements in Zr isotopes have been performed at WNSL using the transient field technique. Results will be compared to model predictions. Work supported by USDOE grants DE-FG02-91ER-40609, DE-FG52-05NA25929, and DE-FG02-88ER40417, U.S. NSF (RU and SB), and DFG under Br 799/12-1.

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Date submitted: 24 May 2005 Electronic form version 1.4