

Abstract Submitted
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Search for Mixed Symmetry States in ^{138}Nd J.R. TERRY, V. WERNER, H. AI, R.J. CASPERSON, A. HEINZ, B. HUBER, R. LÜETTKE, E.A. MCCUTCHAN, J. QIAN, B. SHORAKA, E. WILLIAMS, R. WINKLER, Wright Nuclear Structure Laboratory — Excited states of mixed proton-neutron symmetry have been observed in a number of nuclei—most notably and extensively in ^{94}Mo [1]. Such states are characterized by strong $M1$ transitions to symmetric partner states and are typically observed at 2-3 MeV excitation in nuclides removed from a close shell by two particles and/or two holes. The neutron-deficient ^{138}Nd has been populated by beta decay at the Wright Nuclear Structure Laboratory to search for mixed symmetry states four neutrons below the $N = 82$ shell closure. Gamma-ray emissions are detected with an array of 8 HPGe clover detectors configured for angular correlations measurements and are analyzed to extract multipolarities and mixing ratios. Analysis is ongoing and results will be presented. This work is supported by the U.S. Dept. of Energy grant no. DE-FG02-91ER- 40609.
[1] C. Fransen et al. Phys. Rev. C 67 (2003) 024307

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