

Abstract Submitted
for the HAW09 Meeting of
The American Physical Society

Multitude of bands in ^{156}Dy ¹ L.L. RIEDINGER, Univ. Tenn., D.J. HARTLEY, USNA, D. CURIEN, J. DUDEK, B. GALL, Univ. Strasbourg, M. ALLMOND, C. BEAUSANG, Univ. Richmond, M.P. CARPENTER, C.J. CHIARA, R.V.F. JANSSENS, F.G. KONDEV, T. LAURITSEN, E.A. MCCUTCHAN, I. STEFANESCU, S. ZHU, ANL, P.E. GARRETT, Univ. Guelph, W.D. KULP, J.L. WOOD, Georgia Tech, M.A. RILEY, X.F. WANG, FSU, N. SCHUNCK, C.H. YU, ORNL, J. SHARPEY-SCHAFFER, S. MAJOLA, iThemba Lab, J. SIMPSON, Daresbury — A Gammasphere measurement was performed on rotational bands in ^{156}Dy using the $^{148}\text{Nd}(^{12}\text{C},4n)$ reaction at 65 MeV with the Atlas accelerator at Argonne. The projectile was chosen to populate many bands at low to medium spins. We have added new transitions and new bands to the family of negative-parity structures in this $N = 90$ nucleus. The lowest lying bands in this region have generally been associated with octupole vibrational modes, converting to two-quasiparticle bands at moderate frequencies. There are deviations from this picture in ^{156}Dy , due perhaps to the robustness of the octupole vibration through the first band crossing.

¹Supported by DOE (DE-AC02-06CH11357 and DE-FG02-ER40983).

L.L. Riedinger
Univ. Tenn.

Date submitted: 30 Jun 2009

Electronic form version 1.4