

Abstract Submitted
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From chiral vibration to static chirality in ^{135}Nd ¹ S. MUKHOPADHYAY, University of Notre Dame, Indiana, USA; UGC-DAE CSR, Kolkata Centre, India, D. ALMEHED, U. GARG, S. FRAUENDORF, T. LI, P.V. MADHUSUDHANA RAO, X. WANG, University of Notre Dame, Indiana, USA, S.S. GHUGRE, UGC-DAE CSR, Kolkata Centre, India, M.P. CARPENTER, S. GROS, A. HECHT, R.V.F. JANSSENS, F.G. KONDEV, T. LAURITSEN, D. SEWERYNIAK, S. ZHU, Argonne National Laboratory, Argonne, IL, USA — Lifetimes were obtained in a DSAM measurement at Gammasphere, using the $^{100}\text{Mo}(^{40}\text{Ar}, 5n)^{135}\text{Nd}$ reaction. Electromagnetic transition probabilities have been measured for the intra- and inter-band transitions in the two sequences in the nucleus ^{135}Nd that were previously identified as a composite chiral bands [1]. The measurements are in good agreement with results of a new combination of TAC and RPA calculations. The chiral character of the bands is affirmed and it is observed that their behavior is associated with a transition from a vibrational into a static chiral regime. [1] S. Zhu et al., Phys. Rev. Lett.91, 132501 (2003).

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Umesh Garg
University of Notre Dame, IN, USA

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