

Abstract Submitted  
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**An Exploration of Structures in the Transitional Odd-Odd Nucleus  $^{160}\text{Lu}$** <sup>1</sup> S.T. HALLGREN, D.J. HARTLEY, US Naval Academy, M.A. RILEY, J. BARON, S. MILLER, Florida State University, J. SIMPSON, P.J.R. MASON, Daresbury Laboratory, E.S. PAUL, A.J. BOSTON, H.C. BOSTON, P.J. NOLAN, J. WRIGHT, University of Liverpool, R.V.F. JANSSENS, A.D. AYANGEAKAA, M.P. CARPENTER, F.G. KONDEV, T. LAURITSEN, S. ZHU, Argonne National Laboratory, L.L. RIEDINGER, University of Tennessee, J. CARROLL, C.J. CHIARA, Army Research Laboratory, J. HARKER, University of Maryland, U. GARG, J. MATTA, University of Notre Dame, W.C. MA, Mississippi State University — It is known that a transition between spherical and deformed isotopes of lutetium occurs near  $N = 88$ . The odd-odd nucleus  $^{160}\text{Lu}$  ( $N = 89$ ) was selected for a study of structural characteristics in this transitional region. High-spin states of  $^{160}\text{Lu}$  were populated using the  $^{120}\text{Sn}(^{45}\text{Sc}, 5n)^{160}\text{Lu}$  reaction and gamma-ray transitions were studied using the Gammasphere spectrometer. Known structures were extended to much higher spin and a new sequence was identified. The resulting bands and nuclear configurations were studied and compared with neighboring isotopes of lutetium.

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