

Abstract Submitted
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Further confirmation of octupole deformation in ^{144}Ba W.A. YZAGUIRRE, J.H. HAMILTON, S.H. LIU, A.V. RAMAYYA, Vanderbilt University, J.K. HWANG, Y.X. LUO, Vanderbilt University, J.O. RASMUSSEN, Lawrence Berkeley National Laboratory, S.J. ZHU, Tsinghua University — The energy levels in ^{144}Ba have been studied with our high statistics 5.7×10^{11} triple- and higher-fold coincidence data taken with Gammasphere. There are reinforcing shell gaps for $\beta_2 = 0.13$ for $Z = 56$ and $Z = 88$, so octupole deformation is expected in ^{144}Ba . The even parity ground state band is seen to high spin with crossing $E1$ transitions from an odd spin, negative parity band earlier, the expected $s_i = 1$ band. Limited evidence for the expected $s_i = -1$ band with the same spins and opposite parities has been reported. $s_i = -1$ band has been clearly established now with the expected crossing transitions between the even and odd spins members. In addition, numbers of new crossing transitions in the $s_i = 1$ band and between the $s_i = -1$ band and $+1$ are seen. These data firmly established the octupole deformation of ^{144}Ba . Work supported by the U.S. Department of Energy under Grants and Contract Nos. DE-FG05-88ER40407 and DE-AC03-76SF00098.

Joseph H. Hamilton
Vanderbilt University

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