

Abstract Submitted
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Enhanced $E3$ Excitations in $^{144,146}\text{Ba}$ and the Evolution of Octupole Collectivity¹ B BUCHER, Idaho National Lab, S ZHU, Argonne National Lab, THE ANL, LLNL, LBNL, INL, UAM, ROCHESTER, MARYLAND COLLABORATION — Recent Coulomb excitation studies on $^{144,146}\text{Ba}$ using the GRETINA-CHICO2 detection system with post-accelerated CARIBU beams have confirmed the existence of enhanced $E3$ transitions in these isotopes which are centered in a region that has long been predicted to exhibit stable octupole-deformed shapes. Furthermore, the widely-varying $E1$ strength observed between these isotopes is well-accounted for by models having octupole-deformed potentials, and the variation has been linked to increased occupancies of specific single-particle orbitals in the reflection-asymmetric potential. This talk will summarize the most recent experimental and theoretical results. In addition, data on octupole-related properties in the surrounding isotopes will be discussed in an attempt to better understand the origin and evolution of octupole collectivity in this mass region.

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