

Abstract Submitted
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Ground-band doubling and chiral doublets in ^{110}Ru J.H. HAMILTON, Vanderbilt U., S.J. ZHU, Tsinghua U./Vanderbilt U., Y.X. LUO, LBNL/Vanderbilt U., J.O. RASMUSSEN, LBNL, A.V. RAMAYYA, J.K. HWANG, Vanderbilt U., Z. JIANG, Z. ZHANG, R.Q. XU, S.D. XIAO, X.L. CHE, Y.N. U, Tsinghua U., W.C. MA, Mississippi State U., J.D. COLE, Idaho National Lab, I.Y. LEE, LBNL, R. DONANGELO, U. Federal Rio de Janeiro — Bands in neutron-rich ^{110}Ru were reinvestigated by measuring high-fold prompt γ -ray coincidence events following the spontaneous fission of ^{252}Cf with Gammasphere. The ground-state band and the γ -vibrational band have been confirmed and expanded with spin up to 20 h and 13 h respectively. Another side band built on a 10^+ state has been established. Its energies are nearly degenerate with the ground band. This is the first case of ground band doubling. Two new sets of $\Delta I=1$ negative parity bands are observed and have the characteristics of chiral vibrational bands. Evidence for their interpretation as chiral band doublets will be presented. These bands are very similar to chiral doublets we found in ^{106}Mo . Preliminary data analysis indicates the possible presence of similar chiral band doublets in ^{112}Ru .

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