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Shape trends and triaxiality in neutron-rich odd-mass Y and Nb isotopes Y.X. LUO, LBNL/Vanderbilt U., J.O. RASMUSSEN, LBNL, I. STEFANESCU, Katolic U., A. GELBERG, Inst. Kernphysik, J.H. HAMILTON, A.V. RAMAYYA, J.K. HWANG, Vanderbilt U., S.J. ZHU, Tsinghua U., P.M. GORE, D. FONG, E.F. JONES, Vanderbilt U., S.C. WU, Nat. Tsing Hua U., I.Y. LEE, LBNL, T.N. GINTER, Michigan State U., M.C. MA, Mississippi State U., G.M. TER-AKOPIAN, A.V. DANIEL, FLNR, JINR, M.A. STOYER, LLNL, R. DONANGELO, U. Fed. Rio de Janeiro — New level schemes of ^{99,101}Y (Z = 39) and ^{101,105}Nb (Z = 41) are established from prompt $\gamma-\gamma-\gamma$ coincidences from the fission of ^{252}Cf at Gammasphere. Bands of $\pi 5/2^+[422]$, $\pi 5/2^-[303]$ and $\pi 3/2^-[301]$ are extended to provide information on nuclear shapes in this odd-Z region. With the Tc (Z = 43), Rh (Z = 45) data and neighboring even-Z data, the Y and Nb isotopes are discussed in terms of shape transition and triaxiality. The pronounced difference observed in the signature splittings between Y and Tc, Rh isotopes indicates an axially-symmetric deformed shape in the Y isotopes, and, large and near maximum triaxiality in Tc-Rh isotopes. Triaxial-rotor-plus-particle model calculations strongly support a pure axially-symmetric shape with large quadrupole deformation in Y isotopes. The model calculations yielded γ values from -19° to -13° for the $5/2^+$ [422] ground-state bands of ^{101,103,105}Nb and -5° for the two negative-parity bands in ^{101}Nb.

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