

Abstract Submitted
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New analysis of levels in $^{96,100}\text{Y}$ J.H. HAMILTON, E.H. WANG, Vanderbilt Univ., A. LEMASSON, GANIL, A.V. RAMAYYA, J.K. HWANG, Vanderbilt Univ., A. NAVIN, M. REJMUND, GANIL, S. BHATTACHARYYA, Variable Energy Cyclotron Centre, Y.X. LUO, Vanderbilt Univ., J.O. RASMUSSEN, LBNL, S.J. ZHU, Tsinghua Univ., G.M. TER-AKOPIAN, YU.TS. OGANESSIAN, JINR — Excited states of neutron rich $^{96,100}\text{Y}$ have been studied by analyzing the high statistics γ - γ - γ and γ - γ - γ - γ coincidence data from the spontaneous fission of ^{252}Cf at Gammasphere and also from the prompt γ -rays in coincidence with isotopically-identified fission fragments using VAMOS++ and EXOGAM at GANIL by using ^{238}U beams on a ^9Be target at energies around the Coulomb barrier. Nine new transitions and 6 new levels in ^{96}Y , and 25 new transitions and 17 new levels in ^{100}Y have been identified. Spins and parities are tentatively assigned according to the systematics. A small deformation with near spherical shape is proposed for ^{96}Y . Bands in ^{100}Y are proposed to be pairing free ones with very large deformation parameter ($\beta_2=0.35(4)$ [1]). Two of the new bands in ^{100}Y can form a $4^+ \pi 5/2[422] + \nu 3/2[411]$ and $5^+ \pi 5/2[422] + \nu 5/2[413]$ neutron pseudo spin doublet. The results are consistent with the onset of very strong deformation at $N=59$ among Y isotopes.

[1] J. Phys. G: Nucl. Part. Phys. **37**, 105103 (2010).

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