

Abstract Submitted
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Possible excited deformed rotational bands in ^{82}Ge J.K. HWANG, J.H. HAMILTON, A.V. RAMAYYA, N.T. BREWER, Vanderbilt University, Y.X. LUO, LBNL/Vanderbilt University, J.O. RASMUSSEN, LBNL, S.J. ZHU, Tsinghua University — Excited states of neutron-rich nucleus ^{82}Ge were studied from the spontaneous fission of ^{252}Cf . Eleven new transitions and seven new levels in ^{82}Ge were identified by using X(Dy)- γ - γ and γ - γ - γ triple coincidences. Possible excited deformed rotational bands are observed, for the first time, in this nuclear region. Coexistence of the spherical ground and deformed excited shapes is proposed in ^{82}Ge . These deformed rotational bands can be formed by 2-particle, 2-hole excitations with 0^+ pairing energy of $\nu 9/2[404]^{-2} \times 1/2[431]^2$ across the N=50 closed shell.

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