

# Shape coexistence and phase transitions of the neutron-deficient Pt isotopes in a configuration mixing IBM

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The matrix-coherent state approach in the IBM [1] with mixing is used to study the geometry of neutron-deficient Pt isotopes. Employing a parameter set for all isotopes determined previously, it is found that the lowest minima goes from spherical to oblate and finally to prolate shape when we approach from semi-magic to the mid-shell pt-isotopes. Phase diagram shows the coexistence regions in function of the number of bosons and the strength of the parameter of mixing.

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[1] A. Frank, P. Van Isacker, C. E. Vargas, Phys. Rev. C **69**, 034323 (2004).