ID de Contribution: **19** Type: **Non spécifié**

Shape coexistence effects in medium mass nuclei within a beyond-mean-field approach

mardi 13 mai 2025 14:10 (30 minutes)

Coexistence phenomena in proton-rich medium mass nuclei bring insights into fundamental symmetries and interactions. The exotic behavior of these nuclei manifested by drastic changes in structure with excitation energy, occurrence of isomeric states, and their complex decay are strongly influenced by shape coexistence and mixing.
Neutron-rich A⊠100 nuclei display a large variety of shape coexistence phenomena dominating their structure and dynamics. Shape coexistence effects are revealed by the structural evolution with spin, excitation energy, and neutron number, as well as the appearance of isomeric states.
Aiming to a simultaneous description of the impact of shape coexistence and mixing on different exotic phenomena we investigated the structure and dynamics of proton-rich and neutron-rich medium mass nuclei in the frame of the beyond-mean-field complex Excited Vampir variational model using the effective interaction derived from a nuclear matter G matrix based on the charge-dependent Bonn CD potential in large model spaces. Results on the comprehensive treatment of different identified characteristics concerning the structure and dynamics of exotic nuclei will be presented.

Author: PETROVICI, Alexandrina (IFIN-HH)

Orateur: PETROVICI, Alexandrina (IFIN-HH)

Classification de Session: Session 5