
EVOLUTION OF MULTIPOLE RESPONSE IN NUCLEI AT FINITE TEMPERATURE

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Giant resonances are well known collective modes which are used to probe the properties of nuclei. Investigation of Giant resonances under extreme conditions provides even more detailed information about the structure and properties of nuclei as well as a further challenge for theory.

In this work, evolution of the multipole response in nuclei is investigated in the framework of the Finite Temperature Random Phase Approximation. Skyrme energy density functionals are used in the calculations which also include two-body spin-orbit and Coulomb interactions. The effect of the temperature on the strength functions and excitation energies of the multipole excitations are investigated for the selected calcium and tin nuclei. In particular, the effect of the temperature on the low-energy part of the excitation spectrum will be discussed.

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