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## Properties of the odd-odd and odd-even nuclei under thermal effects

The properties of the nuclei at finite temperature are an active research topic in nuclear physics, particularly for understanding their structure, collective excitations and statistical behavior under extreme conditions (Cf. for example [1-3]). Facilities such as Alto (Orsay, France), HIE-ISOLDE (CERN) and FRIB (USA) enable the study of hot nuclei through fission reactions and heavy-ion collision.

The aim of the present study is to evaluate the thermal properties of the odd-odd and odd-even nuclei in the rare-earth nuclei, in the frame work of microscopic approach including pairing correlations. The calculations are done for temperature in range  $0 \le T \le 2$ MeV.

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