

FINITE SIZE CORRECTIONS IN THE TWO-LEVEL BCS MODEL

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The properties of nanoscale materials differ from those observed in bulk systems due to discrete structure of their energy spectrum. In this work the small superconducting grains modelled by two level system has been studied. The finite size corrections to the ground state energy, the average number of particles in each level and other characteristics of the system has been studied by means of direct solution of the Richardson's model. We compare our results with those found in the literature and obtained by other techniques.

9.7 cm

13.4 cm

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