

Finite volume corrections and low momentum cuts in the thermodynamics of quantum gases

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The ideal boson gas model is used to test the conjecture, proposed in the literature, that the finite volume corrections can be reproduced, with sufficient accuracy, by using the thermodynamic model with the low particle momenta cut off. We find that this is always possible in principle, but simple, convenient formulae are obtained only when the length of the vessel is no less than a few fermi.

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