

PARTICLE NUMBER FLUCTUATIONS IN QUANTUM GASES

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S u m m a r y

We study particle number fluctuations in relativistic Bose and Fermi gases. The calculations are done within both the grand canonical and canonical ensemble. The fluctuations in the canonical ensemble are found to be different from those in the grand canonical one. Effects of quantum statistics increase in the grand canonical ensemble for a large chemical potential. However, this is not the case in the canonical ensemble. In the limit of the large charge density, the strongest difference between results for the grand canonical and canonical ensembles is observed.