QCD sum rules at finite temperature

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Abstract

Finite energy and Laplace transform QCD sum rules at$T\neq0$ are analyzed, and predictions for vacuum condensates are compared with the low temperature expansion of the energy density and pressure. Results show a serious disagreement which indicates a breakdown of the FESR programme already at dimension four, and which invalidates Laplace transform sum rules, at least in their straightforward extension to finite temperature.

Keywords

Energy density, Field theory, Elementary particle, Quantum field theory, Particle acceleration.