

scale invariant resummed perturbation at finite temperature

Wednesday, July 13, 2016 2:45 PM (30 minutes)

We will illustrate how a nonperturbative variational technique combined with renormalization group (RG) properties efficiently resums perturbative expansions in thermal field theories. The resulting convergence and scale dependence of optimized thermodynamical quantities are drastically improved as compared to standard perturbative expansions, as well as to other related methods such as the screened perturbation or (resummed) hard-thermal-loop perturbation. Our general method will be illustrated for the scalar ϕ^4 model, and we will discuss also how it can be generalized to QCD.

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