

Power corrections to the HTL effective Lagrangian of QED

Thursday, 28 June 2018 17:00 (30)

We present compact expressions for the power corrections to the hard thermal loop (HTL) Lagrangian of QED in d space dimensions. These are corrections of order $(L/T)^2$, valid for momenta $L \ll T$, where T is the temperature. In the limit $d \rightarrow 3$ we achieve a consistent regularization of both infrared and ultraviolet divergences, which respects the gauge symmetry of the theory. We also discuss how to generalise our results in the presence of a chemical potential, so as to obtain the power corrections to the hard dense loop (HDL) Lagrangian.

Primary author(s) : Dr CARIGNANO, Stefano (ICE)

Presenter(s) : Dr CARIGNANO, Stefano (ICE)

Session Classification : Parallel