XQCD 2019 (The 17th International Conference on QCD in Extreme Conditions)



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Logarithms in perturbation theory – NNNLO pressure of cold and dense QCD

Monday, 24 June 2019 17:00 (20 minutes)

I will present results on computing the pressure of cold and dense QCD matter to high loop orders in perturbation theory. Such high-order computations are made possible by resumming contributions from the soft degrees of freedom. In particular, I will cover the computation of the nonanalytic logarithmic terms appearing at NNNLO for T=0, both the leading logarithm based on a paper from 2018 (Phys.Rev.Lett. 121 (2018) no.20, 202701) as well as a work-in-progress computation for obtaining the subleading logarithmic term, which gets distinct contributions from both the resummed soft sector as well as the hard sector.

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