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Propagation of gauge fields in hot and dense plasmas at higher orders

Thursday 27 July 2023 16:00 (25 minutes)

Thermal field theory is indispensable for describing hot and dense systems. Yet perturbative calculations are often stymied by a host of energy scales, and tend to converge slowly. This means that precise results require the apt use of effective field theories. In this talk I describe how the effective description of slowly varying gauge fields, known as hard thermal loops, can be extended to higher orders. I also discuss how to consistently define asymptotic masses at higher orders; and how to treat spectral functions close to the lightcone.

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