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Yang-Mills correlation functions at non-zero temperature

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In QCD many quantities, like bound states properties or positions of (pseudo-)phase transitions, can be calculated from the correlation functions of quarks and gluons. The correlation functions themselves can be determined non-perturbatively from various sets of functional equations. Here, truncated Dyson-Schwinger equations are employed for the study of the gluonic sector of QCD at non-zero temperature, the understanding of which is essential for calculations in full QCD at non-zero temperatures and densities. Various results like the behavior of three-point functions will be presented, and the effects of truncations will be discussed.

Summary

Correlations functions of Yang-Mills theory at non-zero temperature are calculated from Dyson-Schwinger equations in the Landau gauge. Effects of various truncations are studied.

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