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Prospects of effective Polyakov line actions for investigations of dense nuclear matter

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Numerical simulations of QCD on the lattice is an essential tool for non-perturbative investigations at finite temperature. At finite density these investigations are hampered by the sign problem. A reformulation in terms of a Polyakov effective theory allows to circumvent this problem to a large extend. I will summarize the derivation of the effective action in terms of a spatial strong coupling expansion and discuss applications, in particular in the region of dense nuclear matter.

On behalf of collaboration:

None

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