

INFRARED BEHAVIOR OF GLUON AND GHOST PROPAGATORS IN QCD IN THE LANDAU GAUGE

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S u m m a r y

A non-perturbative formalism of the generalized effective action is used for deriving the Schwinger–Dyson equations. In order to clear the domain of integration in the functional integral from gauge copies, a restriction to the Gribov horizon due to Zwanziger is implemented. In this approach, the asymptotic behavior of a gluon propagator and the propagator of Faddeev–Popov ghosts at small momenta is studied. Such a behavior is obtained as a result of solving the coupled Schwinger–Dyson equations in the zeroth and first-order approximations. The qualitative agreement of these results with the ones obtained before is demonstrated, and the quantitative difference in some coefficients is found.