

Abelian dominance in local unitary gauges in pure $SU(2)$ QCD

Presenter: Toru Sekido (Kanazawa University)

Toru Sekido , Katsuya Ishiguro and Tsuneo Suzuki

Abstract: We perform extensive lattice Monte-Carlo simulations of pure $SU(2)$ QCD using the multi-level method and find Abelian dominance also in local unitary gauges such as those diagonalizing a plaquette. A static potential described by Abelian link fields alone give us the same string tension as that of a non-Abelian potential. Moreover we find the coefficient of the Coulomb part is almost equal to that of a non-Abelian potential. Abelian flux squeezing is also studied in the local unitary gauges.