

Abstract Submitted
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Relevant energy scale of color confinement from lattice QCD

ARATA YAMAMOTO, HIDEO SUGANUMA, Kyoto University — We propose a new lattice framework to extract the relevant gluonic energy scale of QCD phenomena which is based on a “cut” on link variables in momentum space. This framework is expected to be broadly applicable to all lattice QCD calculations. Using this framework, we quantitatively determine the relevant energy scale of color confinement, through an analysis of the quark-antiquark potential. The relevant energy scale of color confinement is found to be below 1.5 GeV in the Landau gauge. In addition, we analyze meson masses and the flux-tube distribution by this framework.

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