

## QCD description with a lattice-motivated coupling

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A QCD coupling is constructed which at low momenta qualitatively agrees with the lattice coupling in the MiniMOM scheme. The latter coupling is the product of the gluon dressing function and the square of the ghost dressing function, evaluated in large volume lattice calculations in the Landau gauge. These lattice calculations show that such a coupling  $A_{latt.}(Q^2)$  behaves as  $\sim Q^2$  when  $Q^2 \rightarrow 0$ , and has for positive  $Q^2$  the local maximum at  $Q^2 \approx 0.135 GeV^2$  (in the usual  $\overline{\Lambda}$  scaling). Our constructed QCD coupling fulfills these (low-momenta) conditions; in addition, at intermediate momenta it reproduces the well-established value of the semihadronic  $\tau$  lepton decay ratio, and at high momenta it becomes practically equal to the perturbative coupling (in the MiniMOM scheme). The coupling thus reproduces the known QCD phenomenology at high and intermediate momenta, and at low momenta it fulfills lattice-motivated conditions. As a test, the coupling is then applied with success in evaluation of various QCD quantities.

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