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## The three-quark potential and perfect Abelian dominance in $SU(3)$ lattice QCD

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We study the static three-quark (3Q) potential with high statistics in  $SU(3)$  lattice QCD at the quenched level. For all the distances, the 3Q potential is found to be well described by the Y-Ansatz, i.e., one-gluon-exchange Coulomb plus Y-type linear potential.

As a remarkable fact, we find that the quark confinement force in the 3Q system can be perfectly described only with Abelian variables in the maximally Abelian gauge, which we call “perfect Abelian dominance” of the quark confinement.

Reference: “Perfect Abelian Dominance of Quark Confinement in  $SU(3)$  QCD”, N. Sakumichi and H. Suganuma, Phys. Rev. D90 (Rapid Communication) 111501(R) (2014).

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