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Heavy Meson Interquark Potential from the Dyson-Schwinger Equations

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Abstract:

The resolution of Dyson-Schwinger equations leads to the freezing of the QCD running coupling (effective charge) in the infrared, which is best understood as a dynamical generation of a gluon mass function, giving rise to a momentum dependence which is free from infrared divergences. We calculate the static interquark potential by assuming that it is given by a massive One Gluon Exchange Potential and compare it with phenomenological fits inspired by lattice QCD. We discuss possible physical interpretations of our results regarding heavy quarkonia spectroscopy.

Reference: P.Gonzalez, V. Mathieu and V. Vento, PRD84, 114008 (2011).

Presenter: GONZALEZ, Pedro (University of Valencia)

Session Classification: New Hadrons and Spectroscopy Session