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Hybrid static potentials from Laplacian eigenmodes

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We present a method for computing hybrid static quark-antiquark potentials in lattice QCD based on Laplace trial states. They are formed by eigenvector components of the covariant lattice Laplace operator and their covariant derivatives. The new method does not need complicated gauge link paths between the static quarks and makes off-axis separations easily accessible. We show first results for Σ and $\Pi_{u/g}$ together with their excited states on quenched and dynamical ensembles.

Topical area

Hadronic and Nuclear Spectrum and Interactions

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