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## In-medium static quark potential from spectral functions on realistic HISQ ensembles

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We study the static energy between a quark anti-quark pair in a thermal medium based on ensembles with  $N_f = 2 + 1$  dynamical HISQ flavors. Our dataset spans the phenomenologically relevant temperature range between  $T=140\text{MeV}-2\text{GeV}$  based on lattice sizes  $48^3 \times 10, 12$  and  $16$ . The real- and imaginary part of the potential is determined from the spectral function of Wilson-line correlators in Coulomb gauge. We assess the information content in the correlation functions and deploy three complementary strategies to reconstruct spectral information: model fits, Pade approximation and the Bayesian BR method. Limitations of each approach are carefully assessed.

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