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QCD Sum-Rules Analysis of Meson-Hybrid Mixing in Vector Heavy Quarkonium (G)

Wednesday 13 June 2018 16:30 (15 minutes)

We use QCD Laplace sum-rule to explore meson-hybrid mixing in vector heavy quarkonium. Our cross-correlator calculation supplements perturbation theory with non-perturbative corrections proportional to the four-dimensional and six-dimensional gluon condensates and the six-dimensional quark condensate. After forming the Laplace sum-rule we use experimentally determined hadronic masses to build several single- and multi-resonance models of the $c\bar{c}$ and $b\bar{b}$ mass spectra. These models and the QCD Laplace sum-rule are then used to probe resonances for meson-hybrid mixing. Observations and results of the analysis will be presented.

Author: PALAMETA, A.

Co-authors: HO, J.; HARNETT, D.; STEELE, T.

Presenter: PALAMETA, A.

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