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A Laplace Sum-Rules Analysis of Exotic 0^{+-} and Vector 1^{--} Strangeonium Hybrids

Friday, 16 August 2013 16:50 (20 minutes)

We use QCD Laplace sum-rules to predict ground state masses for $J^{PC} = 0^{+-}$ and $J^{PC} = 1^{--}$ strangeonium hybrids. In our calculations, we include contributions stemming from perturbation theory, 4d quark and gluon condensates, the 5d mixed condensate, and 6d quark and gluon condensates. These two J^{PC}-channels are of particular phenomenological interest as the Y(2175) has quantum numbers 1^{--}, and 0^{+-} is one of the exotic combinations that will be probed by GlueX.

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