Holographic Segre formula in heavy meson physics

In this study, we investigate the applications of a result derived from WKB theory, specifically the Segre-Fermi Rule in its non-relativistic form, within the context of bottom-up holographic QCD. The Holographic Segre formula enables us to compute decay constants based on the holographic confining potential. This data serves as a critical input for extracting quark mass from the decay width associated with a specific process. We employ this methodology to examine electromagnetic decays of vector mesons and determine the corresponding constituent quark mass. Our findings indicate that the computed masses for charm, bottom, and strange quarks exhibit less than 10% deviation from experimental data.

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