Quark Confinement and the Hadron Spectrum XI



Contribution ID: 40 Type: not specified

The quark masses and meson spectrum: A holographic approach

Friday 12 September 2014 15:40 (20 minutes)

The spectrum of radially excited unflavored vector mesons is relatively well measured, especially in the heavy-quark sector. This provides a unique opportunity to observe the behavior of the hadron spectrum at fixed quantum numbers as a function of the quark mass. The experimental data suggests the approximately Regge form for the radial spectrum, $M_n^2 = An + B$, where A and B are growing functions of the quark mass. We use the bottom-up holographic approach to find the functions A and B. The obtained result shows a good agreement with the phenomenology and consistency with some predictions of the Veneziano-like dual amplitudes.

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Session Classification: Parallel III: C6 Heavy Quarks

Track Classification: Section C: Heavy Quarks