

Defect Induced Heavy Meson Dynamics in the QCD Conformal Window

Upon introducing a heavy quark in the perturbative regime of the QCD conformal window we precisely determine the associated heavy meson spectrum and wave functions in terms of the number of light flavours and mass. We then compute the conformal Isgur-Wise function which is a central quantity in heavy quark physics. We further determine the impact of the residual low energy confining dynamics on the heavy meson spectrum. As a working framework, we adapt the heavy quark effective theory to the perturbative conformal window dynamics. Our work lays the foundations to systematically go beyond the infinite mass defect approximation in conformal field theories.

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