



Beitrag ID: 16

Typ: **Talk**

Heavy Meson Dynamics in the QCD Conformal Window

Donnerstag, 18. September 2025 17:00 (15 Minuten)

We investigate the spectrum and wave functions of heavy mesons in terms of the number of light flavours and mass, upon introducing a heavy quark in the perturbative regime of the QCD conformal window. We then compute the conformal Isgur-Wise function which is a central quantity of the dynamics of heavy mesons. We further determine the impact of the residual low energy confining dynamics. The impact of radiative corrections and first-order mass corrections is discussed.

As a working framework, we adapt the heavy quark effective theory to the perturbative conformal window dynamics. The investigation can be easily extended to other gauge representations of the colour group and multi-quark bound states.

Our work lays the foundations to systematically go beyond the infinite mass defect approximation in conformal field theories. Furthermore, our results can be used when constructing bright or dark extension of the Standard Model, for example dark matter models featuring dark mesons.

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Sitzung Einordnung: Talks