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Theorie-Palaver

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Gael Finauri TU München

Light-cone distribution amplitudes of energetic heavy mesons

Light-cone distribution amplitudes (LCDAs) frequently arise in factorization theorems involving light and heavy mesons.

The QCD LCDA for heavy mesons includes short-distance physics at energy scales of the heavy quark mass.

In this talk I will explain how to achieve the separation of this perturbative scale from the purely hadronic effects by expressing the QCD LCDA as a convolution of a perturbative « jet » function with the universal, quark-mass independent HQET LCDA.

This factorization allows to efficiently resum large logarithms between Lambda QCD and m_Q as well as between m_Q and the scale of the hard process in the production of boosted heavy mesons at colliders.

As an application I will present updated theoretical predictions for the brancing ratio of W \rightarrow B \gamma.

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