

Heavy-quark masses and heavy-meson decay constants from QCD sum rules

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We present the sum-rule extraction of the decay constants of the D, Ds, B, and Bs mesons from the two-point correlator of heavy-light pseudoscalar currents. We use the OPE of this correlator in terms of the running heavy-quark mass, for which the perturbative expansion exhibits a reasonable convergence. Our main emphasis is laid on the control over the uncertainties in the decay constants, related both to the input QCD parameters and to the limited accuracy of the method of sum-rules. The latter becomes possible due to the application of our procedure of extracting hadron observables that involves as novel feature dual thresholds depending on the Borel parameter. Our results for the decay constants contain the full analysis of both the statistical and systematic uncertainties.

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