

Higher QCD corrections for inclusive semileptonic B decays

Saturday 30 April 2022 11:30 (30 minutes)

In this talk I will present the recent calculations in perturbative QCD to third order in α_s of the total rate of inclusive semileptonic B decays and the relation between the $\overline{\text{MS}}$ and the kinetic mass of the heavy quarks. Our results have led to a 34% uncertainty reduction in the value of inclusive $|V_{cb}|$. I will furthermore present the α^3 correction to the muon decay which will be important input for future reduction of the uncertainty of the Fermi coupling constant G_F .

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