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Heavy Meson Lifetimes

We present a novel approach to calculate heavy meson lifetimes on the lattice. To tackle this long standing problem, we utilize gradient flow in combination with the short flow time expansion to nonperturbatively renormalize our lattice results and perform a perturbative matching to the $\overline{\text{MS}}$ scheme. This paves the way to circumvent challenges on the lattice such as mixing with operators of lower mass dimension. We focus on D_s mesons to establish and validate our method and plan to study B mesons in the near future.

Secondary track

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