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Short-flow-time expansion of four-quark operators at NNLO QCD

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An essential ingredient to the calculation of heavy meson lifetimes are non-perturbative matrix elements of four-quark operators. The gradient flow formalism provides a way for their calculation in lattice gauge theory. This requires the knowledge of the coefficients of the short-flow-time expansion of the corresponding operators, which can be calculated in perturbation theory. In this talk, the relevant four-quark operators and the calculation of the coefficients of their short-flow-time expansions through NNLO QCD will be described.

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