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Full NNLO QCD corrections to B meson mixing

In this talk I will discuss recent advances made in the calculation of the NNLO QCD corrections to the width difference between B and anti-B mesons. This work focuses on the perturbative high-energy part of the calculation, more specifically the matching coefficients between the $\Delta B = 1$ effective operators of the Weak Interaction and the $\Delta B = 2$ transition operator are calculated as a deep expansion in m_c/m_b .

This calculation yields novel results for the NNLO contributions with penguin operators which had not been considered previously at this order. Moreover, the NNLO contributions with two current-current operators, which were previously only known up to $O(m_c^2/m_b^2)$ are calculated to a higher precision.

Secondary track

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