

Two and three loop QCD corrections to the width difference in the $B_s - \bar{B}_s$ system.

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We report on the calculation of the previously unknown 2- and 3-loop QCD corrections to the flavor precision observable $\Delta\Gamma_{12}^s$ that arises in the mixing of neutral B_s mesons. This project is a crucial step towards the task of reducing the existing perturbative uncertainties of this observable which happen to be much larger than the current experimental error.

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