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Measurement of Δms and Δmd

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The mass differences Δms and Δmd are extracted from the full 2011 LHCb dataset, using the decays B(s)⟶D(s) μ ν, where D(s)⟶K K π. Measured B momentum is reduced due to missing particles. This is corrected for using a simulation-based statistical correction, known as the k-factor. A novel resolution model, also taken from the simulation, is used to fit the proper time distributions and simultaneously fit the K K π-mass distributions, which separates the signal and combinatorial background. Standard LHCb flavour-tagging algorithms are combined with the muon charge to measure B mixing.

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