Neutral B and B_s mixing matrix elements using NRQCD and the MILC HISQ ensembles

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In this talk I will briefly review our recent lattice calculations for matrix elements contributing to the mass and width differences of neutral B mesons [arXiv:1907.01025, arXiv:1910.00970]. The calculations were done using the MILC ensembles generated with 4-flavours of sea quarks utilizing the highly improved staggered quark action. An improved nonrelativistic quark action was used for the bottom quark. Consequences of these calculations include determinations of the CKM matrix elements $|V_{td}|$ and $|V_{ts}|$, predictions for the rare branching fractions $B_{d,s} \to \mu^+\mu^-$, and an improved Standard Model determinations for $\Delta\Gamma_s$.

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