

QED corrections to $B_s \rightarrow \mu \mu$

Tuesday, 9 January 2018 15:25 (30 minutes)

In my talk, I will report on the computation of QED radiative corrections to the rare leptonic decay of strange B mesons. In the previous literature, only the QED corrections above the m_b scale have been included. I will outline an approach to compute corrections below the m_b scale using soft-collinear effective theory. It reveals an unexpected enhancement due to a “non-local annihilation” effect. Numerically, the enhanced corrections are thus far larger than previously estimated and therefore they constitute a necessary ingredient in precise theoretical prediction for the $B_s \rightarrow \mu^+ \mu^-$ decay rate as shown in arXiv:1708.09152.

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