

Search for radiative Ds decays

Wednesday 16 October 2024 18:00 (15 minutes)

The study of weak radiative decays of charmed mesons is still in its developing stage. The weak decays of D mesons pose challenges due to significant final-state interactions. However, decays mediated by $c \rightarrow u\gamma$ transitions can be affected by potential contributions coming from the non-minimal supersymmetry, which is an new physics scenario. The ratio of branching fractions for radiative D^0 decays could be violated already in the SM framework, while a similar ratio for D_s^+ radiative decays offers much better prospects for new physics. We present herein the first sensitivity study of the radiative charm decays $D_s^+ \rightarrow \rho^+\gamma$ and $D_s^+ \rightarrow K^{*+}\gamma$ with data collected by the Belle experiment.

Track type

Flavour Physics

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Session Classification: Parallel - Flavour