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Real photon emissions in leptonic decays of mesons

Friday, 13 December 2019 12:00 (15 minutes)

We present a novel framework to compute the non-perturbative decay width of pseudoscalar mesons into charged leptons by means of Lattice QCD calculations, including for the first time the radiative emission of a photon. Together with the non-perturbative determination of the virtual photon corrections to the processes, this allow accurate predictions at O(αem) for leptonic decay rates for pseudoscalar mesons, significantly improving the precision in the determination of the corresponding Cabibbo-Kobayashi-Maskawa (CKM) matrix elements.

Primary author: SANFILIPPO, Francesco (INFN - Sezione Roma III)

Presenter: SANFILIPPO, Francesco (INFN - Sezione Roma III)

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