

# Impacts of QED radiative corrections on $R(D)$ ratios

*Wednesday, 8 May 2019 14:55 (15 minutes)*

A recent paper (Phys. Rev. Lett. 120, 261804) presented a new evaluation of radiative corrections in the decay channels involved in the ratios  $\mathcal{R}(D^+)$  and  $\mathcal{R}(D^0)$ , which could explain part of the discrepancy between measurements and SM predictions. Using simulated events we quantify the difference between the results in this paper and Photos, which is used to simulate radiative corrections both by LHCb and the B-factories. In addition, we designed a simplified analysis in LHCb to quantify the effect of neglecting radiative corrections on measurements of  $\mathcal{R}(D^+)$  and  $\mathcal{R}(D^0)$ . A paper on this analysis will be submitted to a journal shortly.

## Email

suzanne.klaver@cern.ch

**Primary author:** Dr KLAVER, Suzanne (INFN e Laboratori Nazionali di Frascati (IT))

**Presenter:** Dr KLAVER, Suzanne (INFN e Laboratori Nazionali di Frascati (IT))

**Session Classification:** Parallel session 1

**Track Classification:** CP Violation in Hadrons and Leptons