

Tests of lepton flavour universality violation with Bc meson decays at CMS

Thursday, 14 December 2023 10:30 (10 minutes)

New physics can manifest itself via lepton-flavour-universality-violating (LFUV) processes in LHC proton-proton collisions. In this talk I will discuss the first measurement testing LFUV between tau-leptons and muons with the CMS detector using Bc mesons. In more detail, I will present the measurement of the ratio of the branching fractions $R(J/\Psi) = \mathcal{B}(B_c \rightarrow J/\Psi(\mu\mu)\tau\nu) / \mathcal{B}(B_c \rightarrow J/\Psi(\mu\mu)\mu\nu)$ using proton-proton collision data at a centre-of-mass energy of 13 TeV collected by the CMS experiment in 2018. This result was recently published and demonstrated the CMS potential for LFUV measurements with B mesons.

[in person]

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