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Recent results from LHCb

Monday 26 August 2019 09:00 (30 minutes)

In this talk we will highlight recent results from LHCb with a focus on measurements of CP violation in b and c decays and measurements testing Lepton Flavor Universality at LHCb .
The most recent results on CP violation in the decay, mixing and interference of both b and c hadrons obtained by the LHCb Collaboration with Run I and years 2015-2016 of Run II are reviewed. In particular world best constraints and world first measurements are provided for CKM elements, unitarity angles and charm parameters.
The concept of lepton universality, where the muon and tau particles are simply heavier copies of the electron, is a key prediction in the Standard Model (SM). In models beyond the SM, lepton universality can be naturally violated with new physics particles that couple preferentially to the second and third generation leptons. Over the last few years, several hints of lepton universality violation have been seen in both b->c and b->s semileptonic beauty decays. This presentation will review these anomalies and give an outlook for the near future. Other probes of NP in highly suppressed b-hadron decays will also be discussed.

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