The 33rd International Symposium on Lattice Field Theory (Lattice 2015)



Contribution ID: 94 Type: Poster

Determination of ε_K using lattice QCD inputs

Wednesday, 15 July 2015 18:30 (2h 30m)

We present the Standard Model evaluation of the indirect CP violation parameter $varepislon_K \text{ determined using lattice QCD inputs: } \hat{B}_K, \xi_0, V_{us}, \text{ and } V_{cb}.$ We find that the Standard Model prediction of ε_K with exclusive V_{cb} (lattice QCD results) is lower than the experimental value by 3.6σ . However, this tension disappears with inclusive V_{cb} (results of heavy quark expansion).

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Session Classification: Poster Session

Track Classification: Weak Decays and Matrix Elements