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The role of Flavour in global SMEFT fits

We discuss the role of Flavour physics in global fits of dimension-six operators in the Standard Model Effective Theory. We present results from fits with different assumptions on the SMEFT flavour structure: U(3)^5, U(3)^5 and Minimal Flavour Violation. The leading-order scale dependence of the SMEFT Wilson coefficients is consistently included in the evolution from the UV scale to the electroweak scale and to the low-energy scale of flavor observables. The Standard Model parameters, including quark masses and the CKM matrix, are simultaneously determined with the SMEFT coefficients. The impact of flavour physics in the global fit is highlighted. The global fit is obtained within the HEPfit framework and is based on the state-of-the-art of both experimental results and SM theoretical predictions for all the observables considered.

Secondary track

T09 - Beyond the Standard Model

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