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Global fits of the Unitarity Triangle within and beyond the Standard Model. Updates from the UTfit collaboration.

Flavour physics represents a unique test bench for the Standard Model (SM). New analyses performed at the LHC experiments and new results coming from Belle II are bringing unprecedented insights into CKM metrology and new results for rare decays. The CKM picture provides very precise SM predictions through global analyses. We present here the results of the latest global SM analysis performed by the UTfit collaboration including all the most updated inputs from experiments, lattice QCD and phenomenological calculations for Summer 2025. In addition, the Unitarity Triangle analysis can be used to constrain the parameter space in possible new physics scenarios. We also present an update of the Unitarity Triangle analysis beyond the Standard Model by the UTfit collaboration with the Summer 2025 inputs. Assuming new physics, all of the available experimental and theoretical information on DF=2 processes is combined using a model-independent parametrisation. We determine the allowed new physics contributions in the kaon, D, Bd, and Bs sectors and, in various new physics scenarios, we translate them into bounds for the new physics scale as a function of new physics couplings.

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