

Searches for violation of Lepton Flavor Universality at Belle II

Searches for the violation of lepton flavor universality (LFU) are critical precision tests of the standard model (SM) motivated by the growing number of anomalies reported in several measurements in the flavor sector (quarks and leptons) in the last decades. At the Belle II experiment, thanks to the large amount of tau-lepton pairs produced in electron-positron annihilation, it is possible to perform a full set of LFU tests with unprecedented precision using tau-lepton decays. Such an approach allows not only to test the SM to high accuracy, but it provides a unique and complementary way to understand and eventually establish or rule out the new physics nature of the so-called flavor anomalies. We will discuss the status of the ongoing precision tests of LFU in both hadronic and leptonic tau decays and, using both 3×1 and 1×1 decay topologies, we will present the expected sensitivities to LFU parameters.

What is your topic?

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