

Tau Physics at Belle II

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Content

The SuperKEKB collider has recently achieved an instantaneous luminosity of $2.22 \times 10^{34} \text{ cm}^{-2} \text{ s}^{-1}$, the world's highest, and will increase up to $8 \times 10^{35} \text{ cm}^{-2} \text{ s}^{-1}$ in the next few years. It collides electrons and positrons at the Belle II experiment at a center-of-mass energy of the Upsilon(4S) mass. Belle II is not only considered a Super B-factory, but also a tau-factory. This talk will summarize the experiment features and the tau physics program, and will mainly cover the ongoing studies of the tau group. These include tracking and efficiencies studies, the measurement of the tau mass, and searches for new physics in Lepton Flavor Violating channels; in particular, tau to lepton invisible and tau to lepton gamma.

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