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Flavor Tagging with Deep Neural Networks at Belle II

Tuesday, 21 March 2017 11:30 (20 minutes)

The Belle II experiment is mainly designed to investigate the decay of B meson pairs from $\Upsilon(4S)$ decays, produced by the asymmetric electron-positron collider SuperKEKB. The determination of the B meson flavor, so-called flavor tagging, plays an important role in analyses and can be inferred in many cases directly from the final state particles. In this talk a successful approach of B meson flavor tagging utilizing a Deep Neural Network is presented. Monte Carlo studies show a significant improvement with respect to the established category-based flavor tagging algorithm.

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