

Mixing and CP -violation measurements with D mesons at Belle and Belle II

Saturday 20 July 2024 10:00 (15 minutes)

The Belle and Belle II experiments have collected a 1.4 ab^{-1} sample of e^+e^- collision data at centre-of-mass energies near the $\Upsilon(nS)$ resonances. These samples contain a large number of $e^+e^- \rightarrow c\bar{c}$ events that produce charmed mesons. We present measurements of charm-mixing parameters from flavour-tagged $D^0 \rightarrow K_S^0 \pi^+ \pi^-$ decays. Direct CP violation is searched for in $D^0 \rightarrow K_S^0 K_S^0$ decays, $D^0 \rightarrow \pi^0 \pi^0$ decays and several modes where the D meson decays to a four-body final state. For the four-body decays, asymmetries in the distributions of triple and quadruple moments probe for CP violation.

Alternate track

I read the instructions above

Yes

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