

Charm results at Belle and Belle II

Monday 27 May 2024 14:00 (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. Direct CP violation is searched for in $D^0 \rightarrow K_S^0 K_S^0$ decays and 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.

We present searches for rare flavour-changing neutral current $c \rightarrow u\ell^+\ell^-$ processes in several decay modes. Further, we study several decays of the Λ_c and Ξ_c to determine branching fractions, as well as CP asymmetries in singly Cabibbo-suppressed decays.

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