

## Charm results at Belle and Belle II

*Wednesday, 5 June 2024 09:30 (30 minutes)*

The Belle and Belle II experiments have collected a  $1.4 \text{ ab}^{-1}$  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  $\Lambda_c$  and  $\Xi_c$  to determine branching fractions, as well as  $CP$  asymmetries in singly Cabibbo-suppressed decays.

**Primary authors:** VAHSEN, Sven (University of Hawaii); GEBELINE, Paul (University of Mississippi)

**Presenter:** GEBELINE, Paul (University of Mississippi)

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