



Contribution ID: 14

Type: not specified

Measurement of charm-mixing parameter y_{CP} in $D^0 \rightarrow K_S^0 \omega$ decays at Belle

Within the Standard Model, CP -violation in the charm system is very small, making it a good probe for new physics. The observable y_{CP} parameterizes charm-mixing in D^0 decays to CP -eigenstates and is sensitive to CP -violation in the charm system. The current world average value of y_{CP} is $(0.715 \pm 0.111)\%$, where the precision mostly comes from CP -even decays of D^0 . It includes a measurement from CP -odd final state, $K_S^0 \phi$, in an analysis that assumes no CP -violation. I will present the first measurement of y_{CP} in the CP -odd decay $D^0 \rightarrow K_S^0 \omega$, allowing for CP -violation, using the full Belle dataset. I would also discuss the Belle II prospects of y_{CP} from CP -odd decays.

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Session Classification: Contributed Talks