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$D^0 - \bar{D}^0$ mixing and charm CP violation.

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In this talk, experimental results of charm mixing and CP violation searches will be presented.

Analyses of $D^0 \to K^+\pi^-$, $D^0 \to K^+K^-$, $\pi^+\pi^-$, $D^0 \to K^{(\star)-}\ell^+\nu$, $D^0 \to K^+\pi^-\pi^0$, $D^0 \to \pi^+\pi^-\pi^0$, $D^0 \to K^+K^-\pi^0$, and $D^0 \to K_s\pi^+\pi^-/K^+K^-$ have been carried on within the BaBar and Belle collaborations.

Though evidence of CP violation in the decay, mixing or interference has never been found, compelling evidence of mixing in the D^0 sector has been found in $D^0 \to K^+\pi^-$ and $D^0 \to K^+K^-, \pi^+\pi^-$ events.

The talk will dedicate special attention to time dependent analyses of three body D meson decays, which provide the oportunity to measure the mixing parameters x and y directly.

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Classification de Session: Flavour Physics

Classification de thématique: Experiment