

Other B decays at Belle

vendredi 22 juillet 2011 15:15 (15 minutes)

We report measurements of branching fractions and CP violation asymmetries for $B \rightarrow \phi\phi K$ decays. Results of the study of $B^\pm \rightarrow J/\psi K^\pm$ and $B^\pm \rightarrow \eta_C K^\pm$, that result in a final state of five kaons, will also be presented.

We study the B^- meson decays to the final state of $\bar{p}\Lambda D^0$. The decay $B^- \rightarrow \bar{p}\Lambda D^{*0}$ is observed for the first time, with the invariant mass of the $\bar{p}\Lambda$ system peaking near threshold. Furthermore, we set an upper limit on decay branching fraction of $B^- \rightarrow \bar{p}\Lambda D^{*0}$ in absence of a statistically significant signal.

We report a study of the exclusive B meson decays to the final states $D_s K_S^0 \pi$ and $D_s K K$. We use $D_s^- \rightarrow \phi \pi^-$, $\bar{K}^*(892)^0 K^-$ and $K_S^0 K^-$ decay modes for the D_s reconstruction.

The HyperCP experiment at Fermilab reported the observation of three events for $\Sigma \rightarrow p\mu^+\mu^-$ decay. The dimuon masses of the observed events are clustered within detector resolution of $1 \text{ MeV}/c^2$, around $214.3 \text{ MeV}/c^2$. These decays might be interpreted as a two-body decay, $\Sigma^+ \rightarrow pX^0(214)$, $X^0(214) \rightarrow \mu^+\mu^-$. Several theoretical papers interpret the $X^0(214)$ as a sgoldstino in SUSY model, a light Higgs boson in NMSSM model, or an U-boson. We report on a search for the X^0 particle in B^0 to $K^+(\pi^+)\pi^-X^0$ decays.

We extend the search to a mass region from $212 \text{ MeV}/c^2$ to $500 \text{ MeV}/c^2$ with several different X^0 lifetime assumptions.

We measured the branching fraction of the decay $B^0 \rightarrow J/\psi\eta^{(\prime)}$ based. The branching fraction results were used to constrain the η - η' mixing angle.

These analyses are performed using the large data sample collected with the Belle detector near the $\Upsilon(4S)$ resonance at the KEKB asymmetric e^+e^- collider.

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Classification de Session: Flavour Physics and Fundamental Symmetries

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