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Studies of Radiative Decays and X(3872) production at Belle

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- Search for $1P \rightarrow 1S$ radiative transitions of D mesons
We present a search for $B^- \rightarrow \pi^- D^*0, D^*0 \rightarrow \gamma D0$ with a data sample from the Belle detector at the KEKB e^+e^- collider containing 771×10^6 $B\bar{B}$ pairs. In preliminary studies, we found that the corresponding pionic decays, $D^{*0} \rightarrow \pi^0 D0$ are important backgrounds. These modes have not previously been studied; we measure them in the same data sample, in order to constrain the background component in the final fit to the $\gamma D0$ mass distribution.
- Study of radiative decays of $\chi_{(c1,c2)}$ and X(3872) at Belle
We present a study of the radiative decays of the $\chi_{(c1,c2)}$ and X(3872), produced in B decays. The results are based on a large data sample collected at the Upsilon(4S) resonance with the Belle detector operating at the KEKB asymmetric-energy e^+e^- collider.
- Search for charmonium and charmonium-like states in Upsilon(1S) radiative decays
Using a large sample (10^8) Upsilon(1S) events collected with the Belle detector, we present the results of a first search for charge parity even charmonium and charmonium-like states in Upsilon(1S) radiative decays. No significant $\chi_{(c)}$, η_c , X(3872), X(3915), or Y(4140) signal is observed, and upper limits on the production rates are determined. Furthermore, no significant evidence for excited charmonium states below $4.8 \text{ GeV}/c^2$ is observed.
- Study of X(3872) production in B meson decays
We present a study of the X(3872) meson produced in decays of neutral and charged B mesons. The results are based on a large data sample collected at the Upsilon(4S) resonance with the Belle detector operating at the KEKB asymmetric-energy e^+e^- collider.

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Session Classification: 04 - Hadronic Structure, Parton Distributions, soft QCD, Spectroscopy

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