

Recent results on charmonium(-like) states and search for pentaquark at Belle

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Study of the processes $e^+e^- \rightarrow J/\psi DD$ and $D^{(*)+} D^{-+}$ by Belle is updated, where a new charmonium(-like) state $X(3860)$ is observed with a significance of 6.5σ using full amplitude analysis in $J/\psi DD$, and the first angular analysis is performed in $D^{(*)+} D^{-+}$. We present the measurement of the absolute branching fractions of $B^+ \rightarrow X_{cc} K^+$ and $B^+ \rightarrow D^{(*)0} \pi^+$ decays. Here, X_{cc} denotes η_c , J/ψ , χ_{c0} , χ_{c1} , $\eta_c(2S)$, $\psi(2S)$, $\psi(3770)$, $X(3872)$, and $X(3915)$. We also perform first search for hidden-strangeness penta-quark decay $P_s^+ \rightarrow \phi p$ in the Cabibbo-suppressed decay $\Lambda_c \rightarrow \phi p \pi^0$. All the results presented here exploit the full data set of Belle.

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