

Hadronic transitions in bottomonium at Belle

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The study of hadronic transitions among bottomonium states, and their relative magnitude, can be used as a bench test for non-perturbative approaches to QCD. In particular, transitions through an eta meson, despite involving a heavy quark spin symmetry violation, have been measured to have an unexpectedly enhanced branching fraction with respect to those through a dipion system. A set of recent results obtained using the data collected by the Belle experiment at the energy of the Upsilon(4S) and Upsilon(5S) resonances will be presented. They include the observation of the transition $\text{Upsilon}(5S) \rightarrow \eta \text{Upsilon}(1D)$, an updated measurement of the branching fractions of $\text{Upsilon}(4S) \rightarrow \eta \text{Upsilon}(1S)$ and $\text{Upsilon}(4S) \rightarrow \pi^+ \pi^- \text{Upsilon}(1S, 2S)$ decays, and searches for other possible transitions involving an eta meson.

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