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## Measurement of the decay $B \rightarrow D^* l^+ \nu$ and determination of $|V_{cb}|$ at Belle

*Saturday, 24 July 2010 11:00 (13 minutes)*

We present measurements of the branching fraction and the HQET form factors  $\rho^2$ ,  $R_1$  and  $R_2$  for the decay  $B^0 \rightarrow D^- l^+ \nu$  using untagged  $Upsilon(4S) \rightarrow B \text{ anti-}B$  events. The Cabibbo-Kobayashi-Maskawa matrix element  $|V_{cb}|$  is extracted and a test of the form factor parametrization is presented. The results are based on a large data sample recorded by the Belle detector at the KEKB  $e^+ e^-$  collider.

The measurement of the decay  $B^+ \rightarrow \text{anti-}D^0 l^+ \nu$  does not rely on charged slow pion reconstruction, and thus allows us to cross-check measurements of  $B^0 \rightarrow D^* l^+ \nu$ . We also present measurements of the branching fraction and of the HQET form factors  $\rho^2$ ,  $R_1$  and  $R_2$  obtained with this decay.

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