



Contribution ID: 573

Type: **Parallel Sessions**

## Leptonic and semileptonic B decays at Belle

*Thursday 5 July 2012 10:00 (15 minutes)*

We present a measurement of the decay  $B \rightarrow \tau \nu$  using the full Belle data set including  $772 \times 10^6$   $B\bar{B}$  collected at the KEKB asymmetric-energy  $e^+e^-$  collider. The  $B\bar{B}$  pair events are tagged by fully reconstructing one B meson decaying in a hadronic mode and detecting the  $B \rightarrow \tau \nu$  candidate in the recoil. We obtain the branching fraction for  $B \rightarrow \tau \nu$  and present a direct determination of the product of the B meson decay constant  $f_B$  and the magnitude of the Cabibbo-Kobayashi-Maskawa matrix element  $|V_{ub}|$ . The resulting constraints on the charged Higgs boson are also discussed.

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