

## Electroweak physics from Belle

*Friday, July 17, 2009 3:21 PM (18 minutes)*

We report a study of  $\tau^- \rightarrow \pi^- \pi^+ \pi^- \nu$ ,  $\tau^- \rightarrow K^- \pi^+ \pi^- \nu$ ,  $\tau^- \rightarrow K^- K^+ \pi^- \nu$  and  $\tau^- \rightarrow K^- K^+ K^- \nu$  decays using a  $666 \text{ fb}^{-1}$  data sample collected with the Belle detector at the KEKB asymmetric-energy  $e^+ e^-$  collider. We present the branching fractions as well as the unfolded mass spectra of the total hadronic system for these four decay modes.

We also report the result of a search for a second class current (SCC) via  $\tau \rightarrow \pi \eta^{(\prime)} \nu$  decays.

Sensitivity at the  $10^{-5}$  level can be achieved, while the branching fraction for a SCC is predicted to be at the  $10^{-6} - 10^{-5}$  level in several phenomenological models.

**Primary author:** HAYASAKA, Kiyoshi (Nagoya)

**Presenter:** HAYASAKA, Kiyoshi (Nagoya)

**Session Classification:** VII. Standard Model Electroweak Physics

**Track Classification:** Standard Model Electroweak Physics