

# Measurements of tau hadronic branching fractions and spectra, and search for second class current tau decays

*Friday, 16 August 2013 14:50 (20 minutes)*

We present a set of preliminary and final results on tau branching fractions and invariant mass spectra, and a search for the second class current decay  $\tau \rightarrow \pi \eta' (958) \nu_\tau$ .

The results include new studies of a large number of 3 and 5-prong tau decay modes, either inclusive or classified according the hadronic resonance content ( $K_0^*$ ,  $\eta$ ,  $\omega$ , etc.).

All results are based on the analysis of the BaBar data-set consisting of 430 million tau lepton pairs, corresponding to an integrated luminosity of  $468 \text{ fb}^{-1}$ , collected with the BABAR detector at the PEP-II asymmetric energy  $e^+ e^-$  storage rings.

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**Session Classification:** Quark and Lepton Flavor Physics

**Track Classification:** Quark and Lepton Flavor Physics