

# Measurement of $B^- \rightarrow D^{(*)}\tau\nu$ , using semileptonic tag and leptonic $\tau$ decays with the *BABAR* detector (cancelled)

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Semileptonic decays of  $B$  mesons involving the high-mass  $\tau$  lepton are sensitive probes for physics beyond the Standard Model. The relative rates of branching fractions  $R(D) = \mathcal{B}(B \rightarrow D\tau\nu)/\mathcal{B}(B \rightarrow Dl\nu)$  and  $R(D^*) = \mathcal{B}(B \rightarrow D^*\tau\nu)/\mathcal{B}(B \rightarrow D^*l\nu)$  ( $l = e, \mu$ ) are independent of the CKM element  $|V_{cb}|$  and of other theoretical uncertainties. Based on the  $433 \text{ fb}^{-1}$  data collected at the  $\Upsilon(4S)$  resonance by the *BABAR* detector at the PEP-II collider located at the SLAC National Accelerator Laboratory, we report a measurement of  $R(D)$  and  $R(D^*)$  using semileptonic  $B$ -tagging and leptonic  $\tau$  decays.

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**Session Classification:** Heavy Flavour session