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## Measurement of the branching fractions

$$BF(\tau^- \rightarrow K^- n \pi^0 \nu_\tau), n = 0, 1, 2, 3, \text{ and} \\ BF(\tau^- \rightarrow \pi^- n \pi^0 \nu_\tau), n = 3, 4.$$

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We report the measurements of the branching fractions of the decays  $\tau^- \rightarrow K^- n \pi^0 \nu_\tau$ ,  $n = 0, 1, 2, 3$ , and  $\tau^- \rightarrow \pi^- n \pi^0 \nu_\tau$ ,  $n = 3, 4$ . The measurements are based on a data sample of 435 million tau pairs produced in  $e^+e^-$  collisions at and near the  $Y(4S)$  peak and collected with the *BABAR* detector in 1999–2008. Additional systematic studies have been completed after the presentation of the preliminary results. Most measurements are substantial improvements over previous measurements and  $BF(\tau^- \rightarrow \pi^- 4 \pi^0 \nu_\tau)$  is measured for the first time. These measurements improve the determination of  $|V_{us}|$  from the branching fraction  $BF(\tau^- \rightarrow X_s \nu_\tau)$  computed as the sum of all measured exclusive modes, with a method based on finite-energy QCD sum rules.

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**Session Classification:** Other rare decays