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## **Measurement of the branching fractions $B(\tau \rightarrow K n\pi^0 \nu)$ , $n=0,1,2,3$ , and $B(\tau \rightarrow \pi n\pi^0 \nu)$ , $n=3,4$**

*Monday, 24 September 2018 14:20 (20 minutes)*

We report the measurements of the branching fractions of the decay  $B(\tau \rightarrow K n\pi^0 \nu)$ ,  $n=0,1,2,3$ , and  $B(\tau \rightarrow \pi n\pi^0 \nu)$ ,  $n=3,4$  excluding the contributions that proceed through the decay of intermediate  $K^0$  and  $\eta$  mesons. 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.

These measurements are substantial improvements of previous measurements and  $B(\tau \rightarrow \pi 4\pi^0 \nu)$  is measured for the first time.

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**Session Classification:** Session