Measuring the absolute $D^0 \to K_s\pi^0$ branching fraction THOMAS
MALONEY, University of Cincinnati — We describe an algorithm for measuring the
absolute branching fraction of the $D^0 \to K_s\pi^0$ decay using Monte Carlo data from
the BaBar experiment at SLAC. The power of this algorithm comes from identifying
and counting the number of slow pions, π_s, from charged D^* decay in $c\bar{c}$ events in
which the flavor of the D^* is consistent with the flavor of a fully reconstructed
second charm decay, referred to as the tag, in the same event. The analysis uses
three tagging samples: $D^+ \to K^*\pi^+\pi^+$, $D^* \to D^0\pi^+$ with $D^0 \to K^-\pi^+\pi^0$ and
$D^0 \to K^-\pi^+$ with an additional tag created by requiring the D^0 to come from a
D^{*+} along with a π^+. With 400 fb^{-1} of data, the branching fraction can be measured
with 5% precision, accounting for both the statistical and systematic uncertainties.

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