

Abstract Submitted
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Measurement of the $B_s^0 \rightarrow J/\psi\phi$ branching fraction at CDF DREW KERR, University of Illinois, CDF COLLABORATION — We present a measurement of the branching fraction of the decay $B_s^0 \rightarrow J/\psi\phi$ with the Collider Detector at Fermilab. Using a data sample corresponding to an integrated luminosity of 10 fb^{-1} of $p\bar{p}$ collisions at $\sqrt{s} = 1.96 \text{ TeV}$, we utilize a low transverse momentum dimuon trigger to acquire a large sample of $J/\psi \rightarrow \mu^+\mu^-$ decays. We form fully reconstructed $B_s^0 \rightarrow J/\psi\phi$ and $B^0 \rightarrow J/\psi K^*$ candidates using information from the central tracking system and determine the branching fraction of $B_s^0 \rightarrow J/\psi\phi$ by normalizing with the $B^0 \rightarrow J/\psi K^*$ decay. The measurement improves the current world average value and can be used to extract information about the ratio of fragmentation fractions f_s/f_d between B_s^0 and B^0 production rates.

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