

Abstract Submitted
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Measurement of the B Meson Production Cross Section Using $B \rightarrow \mu^- D^0 X$ JAMES KRAUS, University of Illinois, Urbana, CDF COLLABORATION — We present a measurement of the cross section of B meson production in $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV using the CDF II detector at the Fermilab Tevatron. We use 83 pb^{-1} of data taken between October 2002 and May 2003 that was collected with a trigger sensitive to high momentum muons and displaced tracks. We use partially reconstructed decays in the following modes: $B \rightarrow \mu^- D^0 X$, $D^0 \rightarrow K^- \pi^+$, $B \rightarrow \mu^- D^{*+} X$, $D^{*+} \rightarrow D^0 \pi^+$, $D^0 \rightarrow K^- \pi^+$, and their charge conjugates. We correct for irreducible backgrounds, trigger efficiencies, and detector acceptance. We report the total cross section above a minimum transverse momentum (p_T) of $9 \text{ GeV}/c$ for the rapidity range $|y| \leq 0.6$.

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