

Abstract Submitted  
for the APR07 Meeting of  
The American Physical Society

**Measurement of the  $t\bar{t}$  Production Cross Section in the Lepton+Jets Channel with Lifetime Tagging** HWIDOMG YOO, Brown University, D0 COLLABORATION — We present a measurement of the  $t\bar{t}$  production cross section at a center-of-mass energy of 1.96 TeV. This analysis is based on the selection of events with one charged lepton (electron or muon), missing transverse energy, and 3 or more jets with  $p_T > 20$  GeV and  $|\eta| < 2.5$ . We utilize the e+jets ( $913 \text{ pb}^{-1}$ ) and  $\mu$ +jets ( $871 \text{ pb}^{-1}$ ) data samples collected using the DØ detector. To help distinguish the signal from the background processes, we use a Neural Network algorithm that uses lifetime information to identify the b-quark jets that are associated with top quark decays. We require at least one b- tagged jet to be identified in this analysis.

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Date submitted: 09 Jan 2007

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