

Abstract Submitted
for the APR08 Meeting of
The American Physical Society

Measurement of the top production cross section rate from gluon-gluon fusion at CDF JARED YAMAOKA, Rutgers University, CDF COLLABORATION — We present a measurement of the ratio of top-antitop production cross section via gluon-fusion to the total production cross section in proton-antiproton collisions with $\sqrt{s} = 1.96$ TeV at the Fermilab Tevatron. The data sample, recorded by CDF II, has an integrated luminosity of 955 pb^{-1} . Using an artificial neural network trained on the kinematics to discriminate the gluon-fusion events, we find the ratio of the gluon-fusion cross section to the total cross section to be < 0.33 at the 68% confidence level and < 0.61 at the 95% confidence level. Additionally, we combine this measurement with a complementary analysis using the charged particle multiplicity in top-antitop events and find the ratio to be $0.07+0.15-0.07$.

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Date submitted: 11 Jan 2008

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