

High Energy Physics - Experiment

Measurement of the $t\bar{t}$ Production Cross Section in $p\bar{p}$ Collisions at $\sqrt{s}=1.96$ TeV using Soft Electron b -Tagging

CDF Collaboration, T. Aaltonen, et al

(Submitted on 19 Feb 2010)

We present a measurement of the top quark pair production cross section in $p\bar{p}$ collisions at $\sqrt{s}=1.96$ TeV using a data sample corresponding to 1.7/fb of integrated luminosity collected with the Collider Detector at Fermilab. We reconstruct $t\bar{t}$ events in the lepton+jets channel. The dominant background is the production of W bosons in association with multiple jets. To suppress this background, we identify electrons from the semileptonic decay of heavy-flavor jets. We measure a production cross section of 7.8 ± 2.4 (stat) ± 1.6 (syst) ± 0.5 (lumi) pb. This is the first measurement of the top pair production cross section with soft electron tags in Run II of the Tevatron.

Comments: submitted to Phys. Rev. D
Subjects: **High Energy Physics - Experiment (hep-ex)**
Report number: FERMILAB-PUB-10-035-E
Cite as: [arXiv:1002.3783v1](https://arxiv.org/abs/1002.3783v1) [hep-ex]

Submission history

From: John Paul Chou [[view email](#)]
[v1] Fri, 19 Feb 2010 17:07:40 GMT (506kb,D)

[Which authors of this paper are endorsers?](#)

Download:

- [PDF](#)
- [Other formats](#)

Current browse context:

hep-ex

[< prev](#) | [next >](#)[new](#) | [recent](#) | [1002](#)

References & Citations

- [SLAC-SPIRES HEP](#)
([refers to](#) | [cited by](#))
- [CiteBase](#)

Bookmark([what is this?](#))

