



Contribution ID: 228

Type: **Parallel contribution**

Measurement of the W boson helicity in top quark decays using 5.4 fb^{-1} of $p\bar{p}$ collision data

Friday, 12 August 2011 09:20 (20 minutes)

We present a measurement of the helicity of the W boson produced in top quark decays using $t\bar{t}$ decays in the $\ell+$ jets and dilepton final states selected from a sample of 5.4 fb^{-1} of collisions recorded using the D0 detector at the Fermilab Tevatron $p\bar{p}$ collider. We measure the fractions of longitudinal and right-handed W bosons to be $f_0 = 0.669 \pm 0.102$ [± 0.078 (stat.) ± 0.065 (syst.)] and $f_+ = 0.023 \pm 0.053$ [± 0.041 (stat.) ± 0.034 (syst.)], respectively. This result is consistent at the 98% level with the standard model.

A measurement with f_0 fixed to the value from the standard model yields $f_+ = 0.010 \pm 0.037$ [± 0.022 (stat.) ± 0.030 (syst.)].

Primary author: DAS, Amitabha (University of Arizona)

Presenter: DAS, Amitabha (University of Arizona)

Session Classification: Top Quark Physics

Track Classification: Top Quark Physics