

Abstract Submitted  
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**Measurement of the helicity fractions of  $W$  bosons in  $t\bar{t}$  production in dilepton channel at CDF** CHANG-SEONG MOON, Seoul National University, Korea, CDF COLLABORATION — We present a measurement of the helicity fractions of  $W$  bosons in the  $t\bar{t}$  candidate events selected from final states where both  $W$  bosons are decaying leptonically. The analysis is based on  $5 \text{ fb}^{-1}$  of data collected by the CDF detector at the Fermilab Tevatron in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96 \text{ TeV}$ . The helicity fractions are determined by a comparison of the  $\cos\theta^*$  distribution between the momentum of the charged lepton in the  $W$  boson rest frame and the  $W$  momentum in top-quark rest frame with templates corresponding to left-handed, right-handed and longitudinally polarized fractions exclusively. This is the first measurement of the  $W$  boson helicity fractions in the dilepton channel using kinematic reconstruction at CDF.

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