Abstract Submitted
for the APR07 Meeting of
The American Physical Society

First Measurement of the Top Quark Charge at CDF II ZEYNEP UNALAN, Michigan State University — Since top quark's discovery in 1995, there have been several measurements of the top quark's mass and cross section. Due to this quark's special role in electroweak symmetry breaking, other parameters such as its charge and spin should also be measured. We present the first CDF measurement of the top quark's charge using its decay products from a sample of 1.2 fb^{-1} of data collected with the CDFII detector at the Tevatron collider at Fermilab. The standard model predicts the top quark charge to be +2/3 but alternative theories allow a fourth generation exotic quark with a charge of -4/3. We classify events as either top-like or exotic-like depending on the the charge of the b jet and of the associated W boson. We report confidence level limits for the data to exclude the exotic or standard model hypothesis.

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Date submitted: 11 Jan 2007 Electronic form version 1.4