

Abstract Submitted  
for the APR12 Meeting of  
The American Physical Society

**Search for a Higgs Boson Produced in Association with a Vector Boson Using Like-Sign Dilepton Events at CDF** DAISUKE YAMATO, TORU OKUSAWA, YOSHIHIRO SEIYA, TAKAYUKI WAKISAKA, KAZUHIRO YAMAMOTO, Osaka City University, CDF COLLABORATION — We present a search for the neutral higgs boson produced in association with a vector boson using high- $p_T$  isolated like-sign dilepton events in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV. The data were collected with the CDF-II detector at the Fermilab Tevatron collider. We employ the Boosted Decision Tree technique for separating the backgrounds from signal events to improve the search sensitivity. No signal is observed in the CDF data and we set limits on the production rate of the Higgs boson in the standard model and in an alternative fermiophobic scenario.

Daisuke Yamato  
Osaka City University

Date submitted: 04 Jan 2012

Electronic form version 1.4