

Abstract Submitted  
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**Search for Fermiophobic Higgs in  $4\gamma + X$  Final State at CDF AT-SUNARI HAMAGUCHI, Osaka City University (Japan), CDF COLLABORATION**  
— We present a search for a fermiophobic Higgs boson ( $h_f$ ) based on the Type I Two Higgs Doublet Model in which one of the two Higgs doublets has no couplings to fermions. Previous fermiophobic Higgs searches have not been able to exclude a very light  $h_f$  in the region of large  $\tan\beta$  (the ratio between the two vacuum expectation values in the theoretical model). We describe results of searches using the  $p\bar{p} \rightarrow H^\pm h_f \rightarrow W^* h_f h_f \rightarrow 4\gamma + X$  production and decay channel which we expect to be sensitive to this previously unexcluded region.

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