

Abstract Submitted  
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**Search for a SM Higgs boson in the diphoton final state at CDF**

KAREN BLAND, Baylor University, CDF COLLABORATION — We present the results of a search for a standard model (SM) Higgs boson in the  $H \rightarrow \gamma\gamma$  decay channel using data collected with the CDF detector at the Fermilab Tevatron collider corresponding to  $5 \text{ fb}^{-1}$  of integrated luminosity. Searches for a lower-mass Higgs typically rely on the  $H \rightarrow b\bar{b}$  decay channel due to the large branching fraction; however, the diphoton decay mode is complimentary in that its backgrounds are significantly different, and the identification efficiency and energy resolution for photons are typically much better than that for  $b$ -quark jets.

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