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Search for Higgs Bosons decaying to diphoton final states at D0 GUO CHEN, University of Kansas, D0 COLLABORATION — We present a search for a new particle decaying to two photons, such as the Standard Model Higgs boson, using 7.5 fb⁻¹ of integrated luminosity collected by the D0 detector at the Tevatron from July 2002 to July 2010. No evidence is observed and so limits on the production cross section times the branching ratio as a function of hypothetical particle mass are set at 95% confidence level.

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