

# Evidence of a new boson in the diphoton channel with the CMS detector at the LHC

Doug Berry, University of Notre Dame  
With Advisors Colin Jessop and Nancy Marinelli  
CMS Collaboration  
Higgs to Gamma Gamma Analysis Group

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A search for the standard model Higgs boson in the diphoton channel at the CMS detector will be described. The search was performed on  $5.1 \text{ fb}^{-1}$  and  $5.3 \text{ fb}^{-1}$  of integrated luminosity collected from proton-proton collisions at the LHC with center-of-mass energies of 7 TeV and 8 TeV respectively. An excess is observed at 125 GeV with a local significance of  $4.1\sigma$  above the fitted background. Within the search range of 110-150 GeV the global significance is estimated to be  $3.2 \sigma$ . The result is evidence of a new boson that is consistent with the standard model Higgs boson.