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The search for the Standard Model Higgs boson using the 4 lepton final state and data taken by the ATLAS experiment at the Large Hadron Collider

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The latest search for the Standard Model Higgs boson is presented using the ATLAS experiment at the Large Hadron Collider. The channel analysed is the H->ZZ->4l channel where l denotes to muons and electrons. The results are based on 4.6 fb-1 data taken in 2011 at √s=7TeV and 13.0 fb-1 data taken in 2012 at √s=8TeV. The main analysis uses smoothed signal and background shapes from simulation. Cross-checks with are studied use analytical models for signal and background. Additionally, the latest per-event error mass fit will be presented together with the fit validation of the different models using toy Monte Carlo studies.

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