

Search for the standard model Higgs boson in the $Z\gamma$ decay mode with ATLAS

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The $H \rightarrow Z\gamma$ decay mode is a key to understanding any deviation in signal strength from Standard Model expectation in the $H \rightarrow \text{diphoton}$ decay mode. I summarize the selection, background estimation, statistical treatment and results of search for Standard Model Higgs boson in the channel $H \rightarrow Z\gamma$, $Z \rightarrow l+l$, where $l = e$ or μ , using the 4.6 fb⁻¹ of proton-proton collisions at $\sqrt{s}=7\text{TeV}$ and 20.7 fb⁻¹ of proton-proton collisions at $\sqrt{s}=8\text{TeV}$ recorded by the ATLAS experiment at the LHC. I also describe the recent improvements since the preliminary results presented at the winter 2013 conferences.

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