Overview:
The latest results on the direct experimental search for a Standard Model Higgs boson decaying to a pair of Z bosons are presented. Three distinct final state modes are considered: $H \rightarrow ZZ \rightarrow 4l$, $H \rightarrow ZZ \rightarrow 4\nu$, and $H \rightarrow ZZ \rightarrow lljj$, where $l=e,\mu$. These modes are characterized by low branching ratios with small background contributions. Additionally, the presence of at least one on-shell Z boson ensures clean final states.

A dataset of more than 18 fb$^{-1}$ of pp collisions at $\sqrt{s}=7$ TeV collected by the ATLAS detector at the CERN LHC during the on-going 2011 run is used.

Standard Model Higgs Production

- $H \rightarrow ZZ \rightarrow llqq$, $ll\nu\nu$, $llll$ Searches with ATLAS at LHC

Ryan R. Rios, Southern Methodist University
on behalf of the ATLAS Collaboration