



**HEP 2013  
Stockholm  
18-24 July 2013**



Contribution ID: 778

Type: **Poster Presentation**

## **Search for the Standard Model Higgs boson produced in association with vector bosons and decaying to $bb$ with the ATLAS detector at the LHC.**

A new neutral boson decaying into pairs of photons, W bosons and Z bosons with an invariant mass of 125 GeV has been observed and requires confirmation of its coupling to fermions in order to determine whether it is the Standard Model Higgs boson. A vital observation would be its decay into b quark pairs. This poster presents an updated direct search with the ATLAS experiment for a Standard Model Higgs boson decaying into pairs of b quarks and produced in association with a W or Z boson using LHC proton-proton data at centre-of-mass energies of 7 and 8 TeV.

The search is performed in the three decay modes  $ZH \rightarrow \nu\nu bb$ ,  $WH \rightarrow l\nu bb$  and  $ZH \rightarrow ll bb$  with l denoting either electrons or muons.

**Primary author:** PROISSL, Manuel (University of Edinburgh (GB))

**Presenter:** PROISSL, Manuel (University of Edinburgh (GB))

**Track Classification:** Higgs and New Physics