Beitragsanmeldung zur Konferenz Göttingen 2012

Search for $H \to WW \to \ell\nu qq$ decays in ATLAS — Johanna Bronner, Sandra Kortner, Alessandro Manfredini, •Rikard Sandstroem, Sebastian Stern und Daniele Zanzi — Max-Planck-Institut für Physik, München

The Standard Model predicts a Higgs boson below the TeV scale, while previous experiments at the Large Electron-Positron collider exluded a Higgs boson with mass smaller than 114 GeV. Direct searches at the Large Hadron Collider and Tevatron are currently excluding a large region of heavier Higgs masses. For the Higgs boson masses above 250 GeV, one of the channels contributing to the search is the semi-leptonic decay $H \to WW \to \ell\nu qq$, as the constraints from masses of the two on-shell W-bosons allow for a good suppresion of multijet and $W + jets$ backgrounds. The ATLAS experiment at the Large Hadron Collider has performed a search for $H \to WW \to \ell\nu qq$ decays with 4.8 fb^{-1} proton-proton collision data recorded during 2011. The talk presents the results of this search and the current heavy Higgs mass limits.

Part:	**T**
Type:	**Vortrag;Talk**
Topic:	**2.11 Higgs-Physik (Exp.)**
Email:	**Rikard.Sandstrom@cern.ch**