



Contribution ID: 504

Type: **Poster Presentation**

Standard Model Higgs \rightarrow WW with hadronic tau decays in ATLAS

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Abstract content **
** ** **; (Max 300 words)

In gluon fusion and vector boson fusion Higgs production, the $H \rightarrow WW^{(*)}$ cross section \times branching ratio is relatively large in the mass region $120 < m_H < 240$ GeV (which spans the range still allowed after precision electroweak and LHC exclusions). The backgrounds for this decay channel are also well understood, so a sensitive search is possible. The ATLAS $H \rightarrow WW$ results up to now contain only the $e\bar{e}$, $\mu\bar{\mu}$, and $e\bar{\mu}$ channels, and we extend the search sensitivity in the low Higgs mass region to include the $e\tau$ and $\mu\tau$ channels, where the τ decays hadronically. We present a first look at this decay channel using the 2011 7 TeV data from ATLAS at the LHC.

Apply to be **
** consider for a student **
** ** **; award (Yes / No)?

Yes

Level for award **
** ** **; (Hons, MSc, **
** ** **; PhD)?

PhD

Main supervisor (name and email) **
** and his / her institution

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Would you like to **
** submit a short paper **
** for the Conference **
** Proceedings (Yes / No)?

Yes

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