Contribution ID: **542** Type: **Parallel session talk**

Searches for FCNC in top events with the ATLAS detector

Thursday 18 July 2024 15:06 (18 minutes)

The LHC is a top quark factory and provides a unique opportunity to look for top quark production and decay processes that are highly suppressed or forbidden in the SM. In this contribution results are presented of searches for Flavour Changing Neutral Currents (FCNC) interactions of the top quark. These processes are beyond the experimental sensitivity in the SM, but can receive enhanced contributions in many extensions of the SM. Any measurable sign of such interactions is an indication of new physics. An overview is presented of this search programme, with emphasis on recent searches for FCNC tqX vertices, where X is a Z-boson, a photon, or a Higgs boson, with several Higgs decay channels. A combination for the Higgs-decay related searches is also shown. All searches find good agreement with the background expectation and exclusion bounds are derived that improve very significantly on previous results.

Alternate track

I read the instructions above

Yes

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