Contribution ID: **967** Type: **Parallel session talk**

The top quark EW couplings in the SMEFT -

Thursday 18 July 2024 15:57 (18 minutes)

The electro-weak couplings of the top quark are directly accessible in rare “top+X” production processes at the LHC, where top quark pairs or single top quark are produced in associations with bosons. We present a new analysis of the top sector of the Standard Model EFT. The fit is based on a fully NLO parameterization and includes the most recent (differential) results from ATLAS and CMS. We show that run 2 of the LHC allows, for the first time, to overconstrain the qqttbar and two-fermion operator coefficients and yields competitive bounds. We compare the current bounds to projections for the HL-LHC and future lepton colliders, that can yield powerful constraints.

Alternate track

1. Accelerator: Physics, Performance, and R&D for Future Facilities

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Yes

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