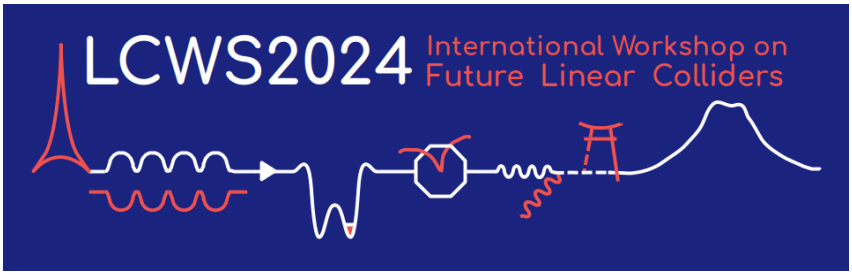

Contribution ID: **202** Type: **Oral presentation (remote)**

Global EFT fits for future colliders

Wednesday, 10 July 2024 16:30 (25 minutes)

We present SMEFiT3.0, an updated global SMEFT analysis of Higgs, top quark, and diboson production data from the LHC complemented by electroweak precision observables (EWPOs) from LEP and SLD. We consider recent inclusive and differential measurements from the LHC Run II and estimate the impact of HL-LHC measurements on the SMEFT parameter space when added on top of SMEFiT3.0, through dedicated projections extrapolating from Run II data. We quantify the significant constraints that measurements from two proposed high-energy circular colliders, the FCC-ee and the CEPC, would impose on both the SMEFT parameter space and on representative UV-complete models. The framework presented in this work may be extended to other future colliders and running scenarios, providing timely input to ongoing studies towards future high-energy particle physics facilities.

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