

New results from TopFitter

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We present updated results for a global fit of dimension six operators in the top quark sector of the Standard Model Effective Field Theory using experimental data from the Tevatron and the LHC at 7, 8 and 13 TeV center-of-mass energy. We include all contributions from dimension six operators up to and including Λ^{-4} in the effective field theory expansion and study the effects of two operator insertions at the order Λ^{-4} . Furthermore we take the top quark decay into account and include in the fit experimental measurements which provide results for observables that depend on the kinematics of the top (anti)quark decay products. This increases the sensitivity to operators that can also contribute for example in single top production and opens up the possibility to study additional operators such as four-fermion operators which couple top quarks directly to leptons. A new strategy for sampling the parameter space of Wilson coefficients and treatment of systematic uncertainties is employed. The results are presented in terms of bounds on individual operators as well as marginalized bounds.

Secondary track (number)

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