# *Global EFT fits on LHC data – some thoughts*

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# A new LHC WG

An experimental contribution …

In this meeting, we should clarify the boundaries and interfaces between this new group, the existing topical LHC WGs and the LHC experiments

# Mandate: standard EFT basis

**The group has a potentially very important role in defining a consensuated common basis for "global" EFT fits**.
Not just to avoid that a lot of our own time and energy is wasted. The stability and clarity of the "basis" are crucial aspects if we are to present the legacy LHC results to a non-HEP audience.

The LHC top WG document – arXiv:1802.07237 - is a good example
(note again: clearly dominated by theorists)

Converge to a standard basis that accounts for the interplay between top/Higgs/EW (see E. Vryonidou's talk on Wednesday).

Corrollary: define standard reduced operator bases - under certain assumptions or in certain BSM scenarios - while the LHC data cannot overconstrain the complete basis

# Mandate: best practice for public data

Who will perform the “global” fit for the LHC?
The experiments? This WG? Ad-hoc fitter collaborations?

Whichever option prevails, this group has an important role in prescribing best practices for public data formats (and the authority to enforce them)

**LHC data is unique and must be made public in a versatile, accessible format with the best possible shelf-life (HEPDATA? STXS? ...)**.
Repeat fits (on 7,8,13 TeV data) as theory improves, combine with new non-LHC data

This information must include information that is not currently (routinely) available outside the experiments, such as the effect on the acceptance of non-zero EFT operator coefficients, the relation with background nuisance parameters, and the relevant EFT operator information...