

Precision LHC Z physics in the flavourful SMEFT

Thursday 23 September 2021 11:50 (25 minutes)

I will discuss the forward-backward asymmetry in $pp \rightarrow \ell^+ \ell^-$ at the Z peak within the Standard Model Effective Field Theory (SMEFT). This observable provides per mille level constraints on the vertex corrections of the Z boson to quarks, which close a flat direction in the electroweak precision fit of the flavourful SMEFT. Moreover, we show that current LHC data are precise enough so that its inclusion in the fit improves significantly LEP bounds even in simple New Physics setups. Talk based on JHEP 08 (2021) 021 [Bresó-Pla, MGA and Falkowski].

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