Contribution ID: **372** Type: **not specified**

Precision Z physics at the LHC in the flavorful SMEFT

Friday, 29 October 2021 13:46 (16 minutes)

We study the forward-backward asymmetry A_{FB} in $pp \to l^+l^-$ at the Z peak within the Standard Model Effective Field Theory (SMEFT). We find that 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 SMEFT fit. Moreover, we show that current A_{FB} data is precise enough so that its inclusion in the fit improves significantly LEP bounds even in simple New Physics setups. This demonstrates that the LHC can
compete with and complement LEP when it comes to precision measurements of the Z boson properties.

Presenter: BRESO, Victor (IFIC)

Session Classification: J: Global interpretations