



ID de Contribution: **203**

Type: **Ordinary**

## Flavour anomalies and UV completion after $R_K$ (\*)

*dimanche 11 mars 2018 18:40 (15 minutes)*

The LHCb measurement of the  $\mu/e$  ratio  $R_K$  indicates a deficit with respect to the Standard Model prediction, supporting earlier hints of lepton universality violation observed in the  $RK$  ratio. We show that the  $RK$  and  $RK^*$  ratios alone constrain the chiralities of the states contributing to these anomalies, and we find deviations from the Standard Model at the  $4\sigma$  level. This conclusion is further corroborated by hints from the theoretically challenging  $b \rightarrow s\mu^+\mu^-$  distributions. Theoretical interpretations in terms of  $Z'$ , lepto-quarks, loop mediators, and composite dynamics are discussed. We highlight their distinctive features in terms of the chirality and flavour structures relevant to the observed anomalies.

### Summary

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**Classification de Session:** Sunday Afternoon: Heavy Flavours (cont)