



Contribution ID: 115

Type: **Talk**

[313] QCD Constraints on the Hadronic Light-by-Light Contribution to the Muon $g - 2$

Tuesday 31 August 2021 17:00 (15 minutes)

The new results by the Fermilab $g-2$ Collaboration have consolidated the long-standing discrepancy between the Standard Model (SM) prediction and the experimental measurement of the muon anomalous magnetic moment, which is traditionally considered a harbinger for New Physics. I will discuss one specific part of the SM evaluation, namely the hadronic light-by-light contribution (HLbL), which is responsible for a sizeable part of the theory uncertainty. I will present a model-independent method which incorporates all available constraints at low and high energies to obtain a more precise estimate. Our numerical analysis allows us to identify what additional information is needed to further improve the SM prediction of the HLbL.

Authors: LÜDTKE, Jan (University of Vienna); PROCURA, Massimiliano (University of Vienna (AT))

Presenter: LÜDTKE, Jan (University of Vienna)

Session Classification: Nuclear, Particle- & Astrophysics

Track Classification: Nuclear, Particle- and Astrophysics (FAKT - TASK)