



Contribution ID: 28

Type: Talk

## Hadronic Light by Light Corrections to the Muon Anomalous Magnetic Moment

We review the Hadronic Light-by-Light (HLbL) contribution to the muon anomalous magnetic moment. Upcoming measurements will reduce the experimental uncertainty of this precision observable by a factor of four, thus breaking the current balance with the theoretical prediction. A necessary step to restore it is to decrease the HLbL contribution error, which implies a study of the high-energy intermediate states that are neglected in dispersive estimates. We focus on the maximally symmetric high-energy regime and in quark loop approximation of perturbation theory, following the method of the QCD sum-rules for which an alternative computational method based on a tensor reduction of the full tensor structure of the quark loop amplitude, instead of projecting on a supposed complete system of tensor structures, is used. By our technique the kinematic-singularity/zero-free tensor decomposition of the HLbL amplitude is explicitly obtained.

**Primary authors:** FAZIO, Angelo Raffaele (Universidad nacional de Colombia); Mr MELO, Daniel (Universidad Nacional de Colombia); Dr REYES, Edilson (Universidad Nacional de Colombia)

**Presenter:** Mr MELO, Daniel (Universidad Nacional de Colombia)

**Session Classification:** Poster session with snacks and coffee