



Contribution ID: 156

Type: **not specified**

Nucleon Compton scattering and the muon $g-2$

Tuesday 9 September 2014 17:00 (20 minutes)

The light-by-light scattering contribution to the muon anomalous magnetic moment is discussed from the Dyson-Schwinger perspective. The structure of the four-photon amplitude and the various slices of the phase space that play an important role for the muon $g-2$ are examined. The systematic construction of the four-photon vertex from the quark level satisfies electromagnetic gauge invariance by construction; it contains quark loops but also all intermediate meson resonances in the two-photon channels. It depends on the quark-photon and quark-Compton vertices which also enter in the calculation of nucleon form factors and the nucleon Compton scattering amplitude. In this way it becomes possible to link together a variety of electromagnetic processes from the same underlying building blocks. I will present first results for the muon $g-2$ and discuss how they compare with present model calculations.

Author: EICHMANN, Gernot (University of Giessen)

Presenter: EICHMANN, Gernot (University of Giessen)

Session Classification: Parallel II: B5 Light Quarks

Track Classification: Section B: Light Quarks