



Contribution ID: 392

Type: Oral

## Directly calculating the glue component of the nucleon in lattice QCD

*Tuesday, November 5, 2019 3:00 PM (15 minutes)*

Computing the gluon component of momentum in the nucleon is a difficult and computationally expensive problem, as the matrix element involves a quark-line-disconnected gluon operator which suffers from ultra-violet fluctuations. But also necessary for a successful determination is the non-perturbative renormalisation of this operator. We investigate this renormalisation here by direct computation in the RI mom scheme. A clear statistical signal is obtained in the direct calculation by an adaption of the Feynman-Hellmann technique. A comparison is conducted in order to verify the energy-momentum sum rule of the nucleon.

### Consider for promotion

No

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**Session Classification:** Track 6 – Physics Analysis

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