Contribution ID: **183**   Type: **Poster**

High Precision Statistical Landau Gauge Lattice Gluon Propagator Computation

Tuesday, July 24, 2018 6:45 PM (2 hours)

We report on results for the Landau gauge gluon propagator computed from large statistical ensembles and look at the compatibility of the results with the Gribov-Zwanziger tree level prediction for its refined and very refined versions. Our results show that the data is well described by the tree level estimate only up to momenta $p \lesssim 1$ GeV, while clearly favoring the so-called Refined Gribov-Zwanziger scenario. We also provide a global fit of the lattice data which interpolates between the above scenario at low momenta and the usual continuum one-loop renormalization improved perturbation theory after introducing an infrared log-regularizing term.

Primary authors: Dr DUDAL, David (KU Leuven, campus Kortrijk);   Dr OLIVEIRA, Orlando (University of Coimbra);   Dr SILVA, Paulo (University of Coimbra)

Presenter: Dr SILVA, Paulo (University of Coimbra)

Session Classification: Poster reception

Track Classification: Vacuum Structure and Confinement