The 38th International Symposium on Lattice Field Theory

LATTICE 21

JULY 26-30 2021, ZOOM/GATHER@MIT

Contribution ID: **382** Type: **Oral presentation**

Chromo-electric and chromo-magnetic correlators at high temperature from gradient flow

Friday 30 July 2021 06:15 (15 minutes)

The heavy quark diffusion coefficient is encoded in the spectral functions of the chromo-electric and the chromo-magnetic correlators that are calculable on the lattice. We study the chromo-electric and the chromo-magnetic correlator in the deconfined phase of SU(3) gauge theory using Symanzik flow at two temperatures 1.5Tc and 10000Tc, with Tc being the phase transition temperature. To control the lattice discretization errors and perform the continuum limit we use several temporal lattice extents Nt=16,20,24,28 and 34. We observe that the flow time dependence of the chromo-magnetic correlator is quite different from chromo-electric correlator most likely due to the anomalous dimension of the former as has been pointed out recently in the literature.

Authors: MAYER-STEUDTE, Julian (Technical University Munich); BRAMBILLA, Nora; LEINO, Viljami (Technical University of Munich (TUM)); PETRECZKY, Peter (BNL); VAIRO, Antonio

Presenter: MAYER-STEUDTE, Julian (Technical University Munich)

Session Classification: QCD at nonzero Temperature and Density

Track Classification: QCD at nonzero Temperature and Density