



Contribution ID: 481

Type: Talk

## Adjoint chromoelectric correlators for heavy quarkonium diffusion

*Monday, 29 July 2024 12:35 (20 minutes)*

The real time evolution of a heavy particle in a strongly coupled plasma is determined by transport coefficients, such as the diffusion coefficient  $\kappa$  and  $\gamma$ . While, in the fundamental representation, the heavy quark diffusion is well studied, the diffusion of adjoint quarks or quarkonium has not yet been fully explored on the lattice. In a suitable NREFT description of QCD,  $\kappa$  can be related to the chromoelectric correlator and the first mass-suppressed correction can be extracted from the chromomagnetic correlator.  $\gamma$  is related to an integral over the chromoelectric correlator after subtracting the zero temperature correlator contribution, which is also related to gluelump masses and P-wave decay of heavy quarkonium.

We present results of the adjoint chromoelectric correlators at finite  $T$  under gradient flow and compare them to results from multilevel calculations.

**Primary author:** MAYER-STEUDTE, Julian (Technical University of Munich (TUM))

**Co-authors:** Mr JANER, Marc (Technical University of Munich); BRAMBILLA, Nora (Technical University München); PETRECKZY, Peter (BNL); DATTA, Saumen (Tata Institute of Fundamental Research); LEINO, Viljami (Johannes Gutenberg University Mainz)

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

**Session Classification:** QCD at non-zero temperature

**Track Classification:** QCD at Non-zero Temperature