



Contribution ID: 67

Type: **not specified**

N =4 super Yang-Mills plasma

Wednesday 5 February 2014 09:30 (30 minutes)

Motivated by the AdS/CFT duality, we study the N=4 super Yang-Mills plasma in the regime of weak coupling and compare it to the QCD plasma. Collective excitations and collisional processes are discussed. Since the Keldysh-Schwinger approach is used, the collective excitations in both equilibrium and non-equilibrium plasma are under consideration. The dispersion relations of gluon, fermion, and scalar fields are found in the Hard Loop Approximation and the corresponding effective action is given. The binary collisional processes, which occur at the lowest nontrivial order of the coupling constant, are reviewed and then the transport properties of the plasma are discussed.

For more see: A. Czajka and St. Mrowczynski, Phys. Rev. D 86, 025017 (2012).

Primary author: MROWCZYNSKI, Stanislaw (National Center of Nuclear Reserach, Warsaw, Poland)

Co-author: CZAJKA, Alina (Jan Kochanowski University, Kielce, Poland)

Presenter: MROWCZYNSKI, Stanislaw (National Center of Nuclear Reserach, Warsaw, Poland)