## The 5th Asian Triangle Heavy Ion Conference (ATHIC2014)



Contribution ID: 15 Type: parallel

## QCD instability induced by a strong electromagnetic field in AdS/CFT

Thursday 7 August 2014 14:40 (20 minutes)

Recently, both theoretical and experimental physicists have been interested in the pair creations of strongly correlated particles in a magnetic field at the heavy ion collisions in RHIC and LHC. It is well-known that a strong magnetic field occurs when each charged particle collides. It may be plausible that a quark antiquark pair creation occurs by the strong magnetic field.

AdS/CFT correspondence has developed as one of the most powerful methods to study a strongly coupled gauge theory as QCD. By using the AdS/CFT, we evaluate the imaginary part of D-brane action including a constant electromagnetic field, and obtain the creation rate of the quark antiquark pair in the strongly coupled gauge theory.

**Author:** SONODA, Akihiko (Osaka university)

Co-authors: HASHIMOTO, Koji (Osaka university); OKA, Takashi (University of Tokyo)

**Presenter:** SONODA, Akihiko (Osaka university)

Session Classification: Theoretical developments 1