Measurement of J/ψ mesons via di-electrons in Cu+Cu collisions at RHIC-PHENIX

S.X. Oda[a], for the PHENIX collaboration

[a]Center for Nuclear Study, Graduate School of Science, University of Tokyo
Wako, Saitama 351-0198, Japan, *oda@cns.s.u-tokyo.ac.jp*

Measurement of heavy quarkonia via di-lepton decay is a sensitive probe for the hot and dense matter created by relativistic heavy ion collisions. Heavy ion data from RHIC so far are confined to measurements of J/ψ production. Models of J/ψ production in heavy ion collisions at RHIC contain a number of important competing effects, including reduction of initial J/ψ yields due to cold nuclear matter effects, reduced feed down from excited charmonium states that melt just above the QGP transition temperature, destruction of J/ψ due to interactions with thermal gluons in the QGP, and coalescence of uncorrelated charm pairs. Systematic studies of J/ψ production in heavy ion collisions with several system sizes and energy densities are important for understanding the behavior of J/ψ in hot and dense nuclear matter.

The latest analysis status of J/ψ obtained from the di-electron channel in Cu+Cu collisions at $\sqrt{s_{NN}}$=200 and 62.4 GeV will be presented.