

The 85th HENPIC seminar by Dr. Guan-nan Xie (谢冠男), Lawrence Berkeley National Lab, Sept. 19, Thursday 10:30 am (Beijing time)

Title: Measurement of Open Heavy Flavor Production in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV in STAR

Abstract:

Due to the large mass, heavy quarks are suggested to be an important tool for studying the properties of the Quark Gluon Plasma (QGP) produced in heavy-ion collisions. In this presentation, we will report on the measurements of production of various charmed hadrons ($D^0(\bar{D}^0)$, D_s^\pm , $D^{*\pm}$, D^\pm and Λ_c^\pm) as well as open bottom production through displaced decay daughters in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV, utilizing the Heavy Flavor Tracker at STAR. Precise results on the D^0 yields are reported for a wide transverse momentum range down to 0 GeV/c in various centrality bins. We will also report on the D^\pm , $D^{*\pm}$, D_s^\pm and Λ_c^\pm spectra measured in different collision centralities and the total charm quark cross section extracted from these measurements in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV. In addition, we will present the nuclear modification factors for daughters from decays of bottom hadrons and compare them to those for charm hadrons.
