Open Heavy Flavor and J/Psi Production at Large Rapidities in dAu Collisions at RHIC

MING XIONG LIU, Los Alamos National Lab, PHENIX COLLABORATION — We study heavy flavor production through prompt muon measurements in the forward and backward rapidities $1.2 < |\eta| < 2.4$ in dAu collisions with the PHENIX muon detectors. The rapidity dependence of prompt muon yields is studied as a function of the transverse momentum of the muon. Open charm is predominantly produced through gluon-gluon interactions at RHIC energy, thus such measurements will shed new light on gluon (anti)shadowing in small (large) Bjorken “x” in the Au nucleus. We also compare open charm to J/Psi yields in the forward and backward rapidities in dAu collisions and study the origin of the large forward and backward asymmetry observed by the PHENIX experiment in J/Psi production in the dAu collisions. This will help us to understand various normal nuclear effects - such as parton shadowing, initial state energy loss and nuclear absorption - on open charm and J/Psi production at RHIC. The current status of this analysis will be presented.