Quarkonium Production at PHENIX

Abigail Bickley[a] for the PHENIX Collaboration

[a]Department of Physics, 390 UCB
University of Colorado, Boulder, Colorado, 80309, USA

Quarkonia provide a sensitive probe of the properties of the hot dense medium created in high energy heavy ion collisions. Hard scattering processes result in the production of heavy quark pairs that interact with the collision medium during hadronization. These in medium interactions convey information about the fundamental properties of the medium itself and can be used to examine the modification of the QCD confining potential in the collision environment. Baseline measurements from the d+Au and p+p collision systems can be used to distinguish cold nuclear matter effects while measurements from heavy ion collision systems, Au+Au and Cu+Cu, can be used to quantify in-medium effects. PHENIX results for the production of the J/ψ for a diverse set of collision systems and energies and for the Υ in p+p collisions will be presented.