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## **Recent results on open and closed heavy flavor from PHENIX at RHIC (15' + 5')**

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Heavy quark production in heavy ion collisions has been used as a probe of the strongly coupled quark gluon plasma in two ways. One is the study of the collision centrality and transverse momentum dependence of the modification of open heavy flavor yields in A+A collisions, which provides information about the coupling of the heavy quark to the medium. The other is the study of the modification of heavy quarkonia in A+A collisions, which provides information about the effect of the medium on the binding of these closed heavy flavor mesons. PHENIX has the ability to study both probes at midrapidity and at forward/backward rapidity. Recently, measurements of quarkonia production in p(d)+A collisions have shown strong modification of the more weakly bound quarkonia, at the same time that evidence of the formation of a small QGP in these light systems has been found. This talk will present results of measurements of separated charm and bottom open heavy flavor modification in Au+Au collisions, and charmonia production in heavy ion collisions as well as in p+Au, d+Au and 3He+Au collisions.

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