

Abstract Submitted  
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**Dielectron measurements in  $d + Au$  collisions at  $\sqrt{s_{NN}} = 200$  GeV using the PHENIX Detector at RHIC** DEEPALI SHARMA, SUNY Stony Brook, PHENIX COLLABORATION — Dielectrons are among the most promising probes for studying the early, hot and dense stages created in relativistic heavy-ion collisions. They are color neutral and so interact only electromagnetically, thus carrying information to the detectors about the conditions and properties of the medium at the time of their creation. The low mass region ( $<1$  GeV/ $c^2$ ) consists primarily of pairs from Dalitz decays of light hadrons and direct decays of vector mesons that can be modified in the medium, while the intermediate (1-3 GeV/ $c^2$ ) and high (4-8 GeV/ $c^2$ ) mass regions are dominated by correlated pairs originating from open charm and beauty respectively. PHENIX measured a large, unexpected enhancement in Au+Au collisions in the low mass region (0.2-0.8 GeV/ $c^2$ ), with respect to the baseline cocktail scaled from p+p collisions. Current theories are unable to explain this excess, and a natural question to ask would be to check for any cold nuclear matter effects in the initial state of the collision. During the 2008 RHIC run, PHENIX collected a large data set of d+Au collisions that allowed a look into the high mass region, thereby providing the characteristics of heavy flavor production. This talk will show the results of dielectron measurements in the d+Au collisions.

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