

Abstract Submitted
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Measurement of Di-electron Continuum in p+p at $\sqrt{s} = 200$ GeV collisions by PHENIX using the Hadron Blind Detector SKY ROLNICK, UC Riverside, PHENIX COLLABORATION — Dielectrons provide a very important probe for studying the hot dense nuclear matter created in heavy ion collisions at RHIC. Since dielectrons are color neutral and produced during all stages of the collision, they provide access to an abundance of information including thermal sources, Dalitz decays, vector meson resonances, correlated open charm and bottom decay, and Drell-Yan processes. Previous measurements from PHENIX have indicated an unexpectedly large enhancement of dielectrons in Au+Au collisions in the low mass region ($0.3 - 0.8 \text{ GeV}/c^2$), a possible signal of chiral symmetry restoration.¹ These measurements were limited by large systematic uncertainties, primarily from a poor S/B ratio. In 2009 the PHENIX experiment was upgraded with the addition of the Hadron Blind Detector which will improve the background rejection by allowing removal of pairs from both partially reconstructed Dalitz decays and photon conversions. In this talk, we will report on the results obtained from 2009 data in p+p using the HBD which will serve as a baseline for the Au+Au results obtained in 2010.

¹S. Afanasiev *et al.* [PHENIX Collaboration], arXiv:0706.3034 [nucl-ex].

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