

Abstract Submitted  
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**Neutral pion production in  $\sqrt{s_{NN}}=200\text{GeV}$  Au+Au collisions at RHIC-PHENIX** TADAAKI ISOBE, Univ. of Tokyo, PHENIX COLLABORATION — The suppression of neutral pions at high transverse momentum in central Au+Au collisions compared to the yield in p+p collision scaled by the number of underlying nucleon-nucleon collisions in Au+Au has been one of the most intriguing observations at RHIC. The observed suppression is interpreted as a consequence of the energy loss of initially hard-scattered partons traversing the hot and dense matter produced in central Au+Au collisions. In Run 4 PHENIX recorded the integrated luminosity of  $0.24\text{ nb}^{-1}$  of  $\sqrt{s_{NN}}=200\text{ GeV}$  Au+Au collisions, which allows us to extend the measurement of neutral pions to high transverse momentum. We present the PHENIX Run 4 results on neutral pion production in  $\sqrt{s_{NN}}=200\text{GeV}$  Au+Au collisions.

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