

Low Momentum Direct Photons in Au+Au collisions at 39 GeV and 62.4 GeV measured by the PHENIX Experiment at RHIC

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Direct photons, which are produced during all stages of a heavy-ion collision, directly probe the conditions of their production environment. The large yield and large anisotropy of low momentum direct photons observed in 200 GeV Au+Au collisions poses a significant challenge to theoretical models. Measurements at a lower collision energy may provide new insight on the origin of the low momentum direct photons. PHENIX has already measured the direct photons at 200 GeV via their external conversion on detector material to di-electron pairs. The advantage of this method is a very good purity in photon identification. This method is also used in our current analysis of the direct photons at two lower energies. We present the results of the measurements of the low momentum direct photons at 39 GeV and 62.4 GeV.

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