

Abstract Submitted
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Measurements of Differential Transverse Momentum Correlation Function from the STAR Experiment MONIKA SHARMA, Wayne State University, Detroit, MI, USA, STAR COLLABORATION — The event anisotropy measurements at RHIC have revealed that the matter created in heavy ion collisions flows with very little viscosity. The estimation of “viscosity-to-entropy” ratio is currently a subject of extensive study [1]. In order to find quantitative experimental information on the viscosity of the medium we present measurements of differential transverse momentum correlation function from the STAR experiment in $Au + Au$ collisions at $\sqrt{s_{NN}} = 200$ GeV. We study the correlation function of the particles as a function of pseudo-rapidity and azimuthal angle in the range $0.2 < p_T < 2.0$ GeV/c at mid rapidity ($|\eta| < 1.0$) for various centralities. This measurement also enables a study of the “soft-ridge”. Reference: [1] S. Gavin and M. Abdel-Aziz, Phys. Rev. Lett. **97** (2006) 162302.

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