

Abstract Submitted
for the DNP11 Meeting of
The American Physical Society

Two-particle correlations on transverse rapidity and the momentum dependence of angular correlation features in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV at STAR¹ ELIZABETH OLDAG, University of Texas at Austin, STAR COLLABORATION — Two-particle 2D correlations on transverse rapidity y_t from Au+Au collisions at STAR will be presented. The correlations are formed from charged particles with $p_t \geq 0.15$ GeV/c, $|\eta| \leq 1$, and 2π azimuth. A peak in transverse rapidity correlations around $(y_t, y_t) = (3,3)$ ($p_t = 1.4$ GeV/c) is observed and remains at approximately the same position from peripheral to most central collisions. Pairs distinguished by charge combination and small versus large relative azimuth angles will also be presented. A peak in “back-to-back” pairs around $(y_t, y_t) = (3,3)$ persists even in more central collisions remaining at approximately the same y_t . To study how pairs correlated in the (y_t, y_t) peak contribute to correlation features in relative pseudorapidity η_Δ and azimuth ϕ_Δ , a new cut scheme was implemented consisting of 28 distinct momentum ranges. The (y_t, y_t) distribution of particles producing the angular correlation structures associated with minimum bias jets will be presented. Interestingly, these results show that the extended correlation on relative η commonly referred to as the “ridge” is not softer relative to the minijet peak near the origin and is harder than the inclusive spectra.

¹Research supported in part by the U.S. Dept. of Energy.

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Date submitted: 01 Jul 2011

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