High-p_T Triggered $\Delta\eta$-$\Delta\phi$ Correlations in Au+Au Collisions

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We present the first measurement of pseudorapidity ($\Delta\eta$) and azimuthal angle ($\Delta\phi$) correlations between high transverse momentum charged hadrons ($p_T > 2.5$ GeV/c) and associated particles at both short- (small $\Delta\eta$) and long-range (large $\Delta\eta$) over a continuous pseudorapidity acceptance ($-4 < \Delta\eta < 2$).

The study of correlations with respect to high-p_T particles is a powerful tool for examining the modification of jets as they interact with the hot and dense medium created in heavy ion collisions. In this talk we explore the various near- and away-side features of the correlation structure as a function of centrality in 200 GeV Au+Au collisions. In particular, this measurement allows us to determine much more completely the longitudinal extent of the "ridge" structure first observed by the STAR collaboration over a limited η range [1].

References

[1] J. Adams et al. *Phys. Rev. Lett.*, **95**, (2005) 152301.