

Production anisotropy of h_{\pm} , π_{\pm} and protons at high- p_T in Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV

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The ALICE collaboration has recently reported an observation of an enhanced intra-jet yield of charged particles associated with the high- p_T trigger particle in central Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV [\cite{Aamodt:2011vg}](#). There are several possible explanations of the origin of this enhancement: (i) modifications of the fragmentation function, (ii) bias on the p_T distribution of the outgoing partons due to the energy loss and (iii) possible change of the quark/gluon relative abundance due to the different coupling of quarks and gluons to the nuclear medium. An analysis of the transverse jet-fragmentation variation with collisional centrality may help to unravel the origin of the intra-jet charged particle yield enhancement. I will present the measurement of the centrality evolution of the transverse component distribution of the particles associated to the high- p_T particle in Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV.

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