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## Study of jet fragmentation with particle correlations in Pb-Pb collision at 2.76 TeV by ALICE

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A high- $p_T$  jet suppression first observed at RHIC has been reported also at the LHC.

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 ( $I_{AA}$ ) in central  $\text{Pb-Pb}$  collisions at  $\sqrt{s_{NN}}=2.76 \text{ TeV}$  which may be also interpreted as a hint of the modification of the fragmentation function due to induced gluon radiation.

In order to study further the nature of the intra-jet correlation yield enhancement an analysis of the jet-fragmentation transverse momentum was performed. Modification of this distribution with the centrality of the collision will be presented. A possible path length dependency of the induced radiation is studied using a comparison of the two-particle correlation for different orientations of the trigger particle with respect to the event plane and comparing the jet-fragmentation transverse momentum distribution measured in different event-by-event anisotropy classes.

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