Contribution ID: **238** Type: **2a) Jets and high-pT hadrons (TALK)**

Using di-hadron correlations to investigate jet modifications in Pb-Pb collisions with ALICE

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The comparison of jets measured in heavy-ion collisions with jets measured in pp collisions is a rich source of information on jet-medium interactions. These medium-induced modifications can be prominent at low p_{T}, where traditional jet reconstruction tools are difficult to use. Measurements of di-hadron correlations provide an alternative means to study jets in this p_{T} regime. With this technique, one calculates the pseudorapidity ($\Delta\eta$) and azimuthal angle ($\Delta\varphi$) differences between trigger and associated particles, and observes the manifestation of the jet fragmentation as a peak around $(\Delta\eta, \Delta\varphi) = (0, 0)$. The modification factor I_{AA} is the yield of the jet-like peak in Pb-Pb divided by the corresponding yield from pp collisions at the same energy. In this talk, we will present the latest ALICE measurements of I_{AA} with charged hadrons from collisions with a center of mass energy per nucleon-nucleon pair of 2.76 TeV. We observe that the $\Delta\eta$-dependent I_{AA} shows a narrowing in pseudorapidity in central collisions for trigger particles with a high p_{T}. We also investigate the path-length dependence of jet modification by measuring I_{AA} as a function of the relative angle between the trigger particle and the event plane. These measurements will be compared to various model calculations, and are expected to place strong constraints on energy loss models.

Summary

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