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D meson azimuthal anisotropy measured with ALICE experiment

Thursday, 15 November 2012 10:00 (30 minutes)

The ALICE experiment at the LHC is dedicated to the study of ultra-relativistic heavy-ion collisions, with the aim of investigating the high-density color deconned state of strongly interacting matter that is expected to be formed in these collisions.
Heavy quarks serve as a probe of the dynamics of the medium since they are produced at the early stages of the collisions and they propagate through the created matter.
The D meson azimuthal anisotropy (v2) is expected to bring insights into the degree of thermalization of charm quarks within the quark-gluon plasma.
A non-zero v2 at low transverse momentum indicates a collective motion of charm quarks with respect to the bulk of created matter, while at high transverse momentum v2 is sensitive to the path length dependence of the charm quark energy loss within the medium.
The measurement of D0, D+ and D+ elliptic
ow and D0 RAA versus event
plane in semi-central Pb{Pb collisions at
p
sNN = 2:76 TeV will be presented. D mesons have been reconstructed via their hadronic decay channels (D0 ! K⊠+, D+ ! K⊠++ and D+ ! D0+) in the central rapidity region.

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