## **Quark Matter 2012**



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## Three-Particle Azimuthal Correlations with an Intermediate- $p_T$ Trigger in Pb-Pb at $\sqrt{s_{NN}}=2.76$ TeV in ALICE

Thursday 16 August 2012 16:00 (2 hours)

Tri-hadron azimuthal correlations are studied in Pb-Pb collisions at  $\sqrt{s_{NN}}=2.76$  TeV in ALICE. They are analyzed with one intermediate  $p_T$  trigger to preferentially select on jets and two lower  $p_T$  associated particles. With these correlations interaction of the jets and the medium can be studied. Three-particle correlations can give insight into the sources of modification to the jet shape such as jet deflection by radial flow,  $k_T$  broadening, path length dependent energy loss, or conical emission from either \v{C}erenkov gluon radiation or a Mach Cone. In addition, different background subtraction systematics allow us to study three-particle correlations in the  $p_T$  region where the flow systematics are very large in two-particle correlations. The dependence of the results on collision centrality and on trigger and associated particle  $p_T$  will be presented.

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