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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

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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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