

## Hadron+jet measurements in Pb-Pb collisions at $\sqrt{s_{\text{NN}}} = 5.02 \text{ TeV}$ with ALICE

*Tuesday 2 October 2018 17:25 (20 minutes)*

The measurement of jets recoiling from a trigger hadron in heavy-ion collisions can be used to understand the properties of the Quark Gluon Plasma. Jet-medium interactions cause jets to lose energy in the medium, and may modify the jet structure. Jet deflection towards large angles may also occur - multiple soft scatterings in the medium broadens the overall azimuthal correlation, while possible Moliere scatterings off quarks and gluons is expected to broaden the tail of the correlation. This can be studied through a measurement of the hadron-jet acoplanarity. While a measurement from Run 1 showed no evidence of large-angle jet broadening with respect to vacuum expectation within experimental uncertainties, recent theoretical work has highlighted that low hadron trigger  $p_T$  and low recoiling jet  $p_T$  configurations show more sensitivity to in-medium modifications to the acoplanarity.

To explore these phenomena, we present a new measurement of the semi-inclusive distribution of charged jets recoiling from a trigger hadron in Pb-Pb collisions at  $\sqrt{s_{\text{NN}}} = 5.02 \text{ TeV}$ . This technique experimentally allows to suppress the combinatorial background and thus explore jet substructure and acoplanarity down to low  $p_T$  and large  $R$ . A study of jet quenching through the  $p_T$ -differential comparison of central and peripheral collisions, jet acoplanarity through the angular distribution of the hadron and recoil jet, and jet energy redistribution through comparison of different jet cone radii will be shown.

### Summary

**Authors:** ALICE COLLABORATION; NORMAN, Jaime (Centre National de la Recherche Scientifique (FR))

**Presenter:** NORMAN, Jaime (Centre National de la Recherche Scientifique (FR))

**Session Classification:** Parallel 3