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Measuring Jet Constituent Yields in 5.02 TeV Pb–Pb Collisions Using Jet-Hadron Correlations with ALICE

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Hard partonic scatterings serve as an important probe of quark-gluon-plasma (QGP) properties. The properties of jets and their constituents can provide a tool for understanding the partonic energy loss mechanisms. Low momentum jets offer a unique window into partonic energy loss because they reconstruct the partons which have lost a significant amount of energy to the QGP medium. The main difficulty in studying low momentum jets in heavy ion collisions is the presence of a significant uncorrelated background of low momentum hadrons from soft processes. One way to deal with this background is to use jet-hadron correlations to fit and subtract the soft, flow-modulated background. This technique allows measurements of the near and away side yields. We present constituent yields for Pb–Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV. These yields are a measurement of the raw fragmentation function. We discuss prospects for unfolding the distributions of yields to get a corrected fragmentation function for low jet momenta.

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