

Neutral meson production with ALICE at the LHC

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Summary

π^0 and η meson production cross sections are presented for pp collisions at $\sqrt{s} = 0.9, 2.76$ and 7 TeV. NLO perturbative QCD calculations overestimate π^0 and η mesons cross sections at $\sqrt{s} = 7$ TeV, but agree with the measured π^0/η ratio. π^0 production cross section is measured in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV. The spectrum and the nuclear modification factor (R_{AA}) of the π^0 production at different centralities show a strong suppression with respect to pp collisions. Imbalance parameter x_E is presented for leading isolated π^0 meson associated to a jet in opposite direction and compared with NLO calculations for pp collisions at $\sqrt{s} = 7$ TeV.

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