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Neutral meson production with ALICE at the LHC

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Summary

pi^0 and eta meson production cross sections are presented for pp collisions at sqrt(s) = 0.9, 2.76 and 7 TeV. NLO perturbative QCD calculations overestimate pi^0 and eta mesons cross sections at sqrt(s) = 7 TeV, but agree with the measured pi^0/eta ratio. pi^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 pi^0 production at different centralities show a strong suppression with respect to pp collisions. Imbalance parameter x_E is presented for leading isolated pi^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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