

Neutral pion production in pp collisions at LHC energies

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The ALICE experiment at LHC is designed to study very wide p_T range neutral mesons in all collision systems and energies provided by LHC, what is useful to test QCD theory predictions.

ALICE covers the measurement of neutral pions with the photon conversion method (low and intermediate p_T) making use of the ALICE-ITS and TPC, and the electromagnetic calorimeters PHOS and EMCAL (intermediate and high p_T). High p_T can be reached thanks to the triggering capabilities of the calorimeters.

In LHC Run1, the neutral pions were measured in pp collisions at $\sqrt{s} = 0.9, 2.76, 7$ and 8 TeV by using above detectors. In pp collisions at $\sqrt{s} = 8$ TeV measurement, not only minimum-bias trigger but also the high energy photon trigger were used. Benefit from the specific trigger, high p_T neutral pion (up to 40 GeV/c) was measured. We will discuss the neutral pion production at LHC energies and compare them.

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