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Type: **Theory poster**

Hint of pion condensation in proton-proton collisions at the LHC using non-extensive Tsallis statistics

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A study is performed on the possible Bose-Einstein Condensation (BEC) of pions in proton-proton (pp) collisions at $\sqrt{s} = 7$ TeV at the Large Hadron Collider. To have a better and clear understanding, the results of pp systems have been contrasted with the systems produced in Pb-Pb collisions. We studied the temperature and final state multiplicity dependence of the number of particles in the pion condensates. A wide range of multiplicity is considered, covering the hadronic and heavy-ion collisions, using experimental transverse momentum spectra inputs. We observe a clear dominancy of non-extensive parameter q , which measures the degree of non-equilibrium, on the critical temperature and number of particles in the pion condensates.

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