

Bose-Einstein correlations of charged hadrons in RHIC and LHC energies

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In proton-proton collisions at a center-of-mass energy of $\sqrt{s} = 13$ TeV, gold-gold collisions at energies ranging from $\sqrt{s} = 7.7$ GeV to 200 GeV, and lead-lead collisions at 2.76 TeV and 5.02 TeV, Bose-Einstein correlations of charged hadrons are examined across the entire multiplicity spectrum of reconstructed charged particles. The CMS data are then compared with results from proton-proton collisions at $\sqrt{s} = 13$ TeV. Computational data are generated using two theoretical models, AMPT and PYTHIA 8. In the case of PYTHIA 8, data are produced under conditions with and without Bose-Einstein correlations. For AMPT, data are generated under conditions with and without string melting.

Author: MONDAL, Mohammad (Tata Institute of Fundamental Research (IN))

Presenter: MONDAL, Mohammad (Tata Institute of Fundamental Research (IN))

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