

Results on minimum bias interactions, underlying event and particle production, and Bose-Einstein correlations from ATLAS

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Measurements of the properties of charged particle production are presented from proton-proton collisions at different centre-of-mass energies in the range of 0.9 to 13 TeV and compared to various Monte Carlo event generator models. Furthermore particle distributions sensitive to the underlying event in proton-proton collisions have been measured and are compared to theoretical models. The production properties of mesons and baryons are presented and compared to predictions.

The effects of space-time geometry in the hadronization phase has been studied in the context of Bose-Einstein correlations between charged particles, for determining the size and shape of the source from which particles are emitted and for interpreting of quark confinement effects. Bose-Einstein correlation parameters are investigated in p-p collisions at 900 GeV and 7 TeV, up to very high charged-particle multiplicities.

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