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Charged jet spectra in proton-proton collisions with the ALICE experiment at the LHC

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Jets are collimated sprays of particles resulting from fragmentation of associated hard scattered partons. They are measured in different types of collisions at different energies to test perturbative Quantum Chromodynamic calculations and are used to study the hard scattering, fragmentation, hadronisation and other properties of partons. These properties studied in simple systems such as proton-proton collisions, serve as a baseline to investigate their modifications by hot and dense nuclear matter created in high energy heavy-ion collisions.

We have analysed data from minimum bias proton-proton collisions at \sqrt{s} of 2.76 and 7 TeV collected using the ALICE detector system at the LHC and reconstructed the inclusive jet cross-section from charged tracks at midrapidity. We present jet spectra reconstructed using modern anti-k_T and k_T algorithms with underlying event subtraction and correction for detector effects via unfolding and its systematics study for both energies. Furthermore, results from fragmentation function analyses and jet shape observables are shown. All results are compared with other experimental results and with Monte Carlo generators.

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