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Measurement of the inclusive jet cross section in ATLAS

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The data collected in ATLAS at $\sqrt{s}=7$ TeV in 2010, are being used to perform the measurement of the inclusive jet cross section. The processes studied in this measurement are the first giving a glance at the physics at the TeV scale. The presentation will focus on the measurement of the inclusive jet cross section, looking at jets in different rapidity intervals up to very forward regions, with transverse momentum in the interval 0.02-1.5 TeV for central rapidities. The new phase space regions covered by the measurement is important to investigate the presence of new physics, as well as to study the parton distribution functions and the soft non-perturbative part of the interactions. The systematics of the measurement has been widely investigated, and they will be presented. In particular, the impact of the uncertainty on the energy calibration of jets, which is the cause of the dominant uncertainty in the measurement, will be discussed.

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