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Inclusive b-jet production measurement on early CMS data

We describe a measurement of the inclusive b-jet production in pp collisions at $\sqrt{s} = 7$ TeV. The analysis has been done on the first physics data collected in 2010 by the CMS experiment at the Large Hadron Collider at CERN. To improve the low pT measurement, the jets are reconstructed with the Particle Flow algorithm. The experimental uncertainties from jet energy corrections, jet energy resolutions and luminosity are reduced by taking a ratio to the inclusive jet production cross section. A secondary vertex tagger with high purity selection is used as the most reliable b-tagger for this early measurement.. The leading uncertainties for the tagging efficiency are the relative LO+NLO contributions from flavor creation, flavor excitation and gluon splitting.

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