

## Inclusive jet measurement at 13 TeV

We present a measurement of the inclusive jet production in proton-proton collisions at the LHC at  $\sqrt{s} = 13 \text{ TeV}$ . The double-differential cross sections are measured as a function of the jet transverse momentum  $p_T$  and the absolute jet rapidity  $|y|$ . The anti- $k_t$  clustering algorithm is used with distance parameter of 0.4 (0.7) in a phase space region with jet  $p_T$  from 97 GeV up to 3.1 TeV and  $|y| < 2.0$ . Data collected with the CMS detector in 2016 are used, corresponding to an integrated luminosity of  $36.3 \text{ fb}^{-1}$  ( $33.5 \text{ fb}^{-1}$ ). In this talk, we focus on details of the analysis. In particular, we introduce tests of smoothness based on Chebyshev polynomials, used to ensure the quality of the measurement and its use in the context of QCD interpretation.

### Submitted on behalf of a Collaboration?

Yes

**Author:** CMS COLLABORATION

**Presenters:** CMS COLLABORATION; BAUTISTA GUZMAN, Irais (Autonomous University of Puebla (MX))

**Session Classification:** WG4: QCD with Heavy Flavours and Hadronic Final States

**Track Classification:** WG4: QCD with Heavy Flavours and Hadronic Final States