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W/Z+jets and W/Z+HF-jets production at ATLAS

The production of jets in association with a W or a Z boson in proton-proton collisions is an important process to study QCD in multi-scale environments. Moreover, measurements of W/Z boson production associated with heavy- flavor (HF) quarks provide important experimental constraints to improve the theoretical description of these processes, as the uncertainties in the current predictions are larger than the ones obtained in the inclusive case. The detailed knowledge of the production of jets associated with electroweak gauge bosons is also a key element for the understanding of Higgs initiated processes and Beyond Standard Model searches, as they represent an important background in these measurements.

Results for the differential production cross sections for W/Z+jets and W/Z+HF-jets in several kinematics variables measured by the ATLAS in proton-proton collisions at cms energies of 7 and 13 TeV are presented and compared to high-order QCD calculations and recent Monte Carlo simulations.

Experimental Collaboration

ATLAS

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