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Vector boson and heavy flavour associated production in CMS

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The associated production of vector bosons V (W , Z or γ) and jets originating from heavy-flavour (c or b) quarks is a dominant background for many SM and Higgs boson measurements and new physics searches beyond the SM. The study of events with a vector boson accompanied by heavy-flavour jets is crucial to test the theoretical predictions in perturbative QCD up to NNLO, and provides a key tool for Monte Carlo generators. Newest 13 TeV differential cross sections of $V + c/b$ jets are measured as a function of several kinematic observables with the CMS detector at 8 and 13 TeV will be presented, with special attention on pQCD and EW aspects of their production, PDF constraints and modelling of the heavy flavour content of the proton.

Collaboration / Activity

CMS

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