Contribution ID: **114** Type: **not specified**

QCD with jets and photons at ATLAS and CMS

Wednesday, 1 June 2016 16:50 (20 minutes)

Summary

I will first briefly present the ATLAS and CMS experimental apparatus and details on the luminos-ity and centre-of-mass energy used for the presented results. Then, I will briefly
discuss jet recon-struction, energy scale and resolution measurements along with their systematic uncertainties for both experiments. I will continue with presenting few selected QCD results using jets and photons. In particular I will discuss jet cross section measurements at several center-of-mass energies, using both inclusive and dijet samples. These are useful in testing perturbative QCD in new energy regimes, constraining and tuning PDFs, measuring the running of the strong coupling constant, and tuning of MC generators. Then I will also discuss the measurement of dijet azimuthal decorrela-tions with CMS, indirectly probing multijet topologies. I will present the measurement of charged particle jet multiplicities with ATLAS, a major ingredient in quark-gluon jet separation which is an important tool for many standard model (SM) and new physics (NP) searches. I will finish with the measurement of the inclusive
photon production with ATLAS, a critical SM measurement for many Higgs and NP measurements and searches.

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Session Classification: QCD + Heavy Flavour