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Jet and charged hadron results from CMS

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To precisely understand the effect of the hot and dense medium produced in central PbPb collisions on the production of jets and hadrons, initial-state effects such as the nuclear modification of the parton distribution functions (nPDF) must also be understood. These initial-state nuclear effects may be accessed by measuring the distributions of charged particles, inclusive jets, and dijet pairs in pPb collisions, where the effects of the medium produced in PbPb collisions are expected to be largely absent. In this talk, the nuclear modification factor of both jets and of charged-particles in pPb (RpPb) collisions are presented. The spectra of both jets and charged-particles in pPb collisions at 5.02 TeV have been measured with the CMS detector at the CERN LHC using high statistics samples. The RpPb of charged particles is determined by dividing the measured pPb spectrum by a pp reference spectrum constructed using interpolation methods, or alternatively from PYTHIA simulations.

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