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Dilepton measurements from pPb collisions in CMS (WILL BECOME CMS JETS IN PB-PB)

The unprecedented centre-of-mass energy available at the LHC offers unique opportunities for studying the properties of the strongly-interacting QCD matter at extreme temperatures and energy density. With its high precision and large acceptance for charged-particle tracking, calorimetry, and muon detection, CMS is fully equipped to measure (di-)muons in the high multiplicity environment of nucleus-nucleus collisions. These measurements give access to rare probes, such as quarkonia (prompt and non-prompt J/ψ , $\psi(2S)$, and the 3 Upsilon states) and electroweak bosons (W, Z) that are sensitive to various stages of the medium evolution. CMS has performed differential measurements of quarkonium and electroweak boson production in PbPb collisions. Suppression of quarkonium production ordered by the binding energy of the hadrons is observed in central PbPb collisions, while the electroweak bosons appear unsuppressed. In proton-nucleus collisions, cold nuclear matter effects can be studied by comparing the production yields of quarkonia and electroweak bosons with production in pp collisions and with next-to-leading order pQCD calculations. Thus, pPb collisions provide a testing ground for the origin of the modifications observed in PbPb collisions. This talk will present new results of dilepton measurements in pPb collisions at a nucleon-nucleon center-of-mass energy of 5 TeV with CMS.

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