

Production of W and Z bosons in heavy-ion collisions with CMS

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The Compact Muon Solenoid (CMS) is fully equipped to measure leptonic decays of electroweak probes in the high multiplicity environment of nucleus-nucleus collisions. Electroweak boson production is an important benchmark process at hadron colliders. Precise measurements of W and Z production in heavy-ion collisions can help to constrain nuclear PDFs as well as serve as a standard candle of the initial state in PbPb collisions at the LHC energies. The inclusive and differential measurements of the Z boson yield in the muon decay channel will be presented, establishing that no modification is observed with respect to next-to-leading order pQCD calculations, scaled by the number of incoherent nucleon-nucleon collisions. Measurements of the yield of W bosons decaying into a muon and an (anti)neutrino as a function of centrality, and the W charge asymmetry as a function of rapidity show no modifications beyond the expected effect of isospin when compared to pp collisions and the status of the corresponding analyses on pPb collisions will be given.

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