

Overview of Recent Heavy Ion Results from the CMS Experiment

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We present a summary of recent heavy ion results with CMS, including several topics of interest to the study of quark matter. Our interest involves characterizing the properties of the quark-gluon plasma, such as its temperature and transport coefficients, and the dynamical properties leading to collective behavior. We have explored the onset of collectivity in small systems via azimuthal correlations in p -Pb collisions. We discuss energy loss of high momentum partons via measurements of photon-tagged jets, jet shapes, heavy-flavor jets, and reconstruction of heavy-flavor hadrons. We present results on hot and cold nuclear effects on charmonia and bottomonia via measurements in p -Pb and Pb-Pb. In addition, measurements obtained during the 1-day Xe-Xe test run at the LHC, comparing them to the Pb-Pb case, will also be presented. We discuss measurements of W bosons and top quark production in p -Pb collisions, which can constrain nuclear PDFs.

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