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# Measurement of charmonium production in PbPb collisions at 2.76TeV with CMS

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The Compact Muon Solenoid (CMS) is fully equipped to measure hard probes in the di-muon decay channel in the high multiplicity environment of nucleus-nucleus collisions. Such probes are especially relevant for studying the quark-gluon plasma since they are produced at early times and propagate through the medium, mapping its evolution. CMS has measured the nuclear modification factors of non-prompt J/psi (from b-hadron decays) and prompt J/psi in PbPb collisions at $\sqrt{s_{NN}} = 2.76$ TeV. For prompt J/psi with relatively high pt (pt=6.5-30 GeV/c), a strong, centrality-dependent suppression is observed in PbPb collisions, compared to the yield in pp collisions scaled by the number of inelastic nucleon-nucleon collisions. In the same kinematic range, a suppression of non-prompt J/psi, which is sensitive to the in-medium b-quark energy loss, is measured for the first time. Results from the 2010 data taking period are reported and an outlook on the 2011 data analysis will be given.

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