Abstract for an Invited Paper for the SES11 Meeting of The American Physical Society

Results from PbPb Collisions Measured by the CMS Detector

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We will survey the results obtained from the analyses of PbPb collisions taken by the CMS detector during the first heavy ion run at the LHC. The physics topics will include quarkonium suppression studies, the non-suppression of the electro-weak Z and photon gauge bosons, the new insights into jet suppression dynamics afforded by di-jet energy asymmetry measurements, and the extensive investigations into the multiple harmonics of hydrodynamic flow. The quarkonium results will include both the J/Psi prompt and non-prompt production yields, and the Upsilon excited state production modifications in heavy ion collisions. The discussion of the hydrodynamic flow will extend across a variety of complementary methods aimed at disentangling the flow and non-flow contributions to the observed signals.

 $^1\mathrm{On}$ behalf of the CMS Collaboration.