Contribution ID: **335** Type: **2a) Jets and high-pT hadrons (TALK)**

Charged particle nuclear modification factors in pPb, PbPb and XeXe collisions with the CMS experiment

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The spectra of charged particles in XeXe and PbPb collisions at $\sqrt{s_{NN}} = 5.44$ TeV and $\sqrt{s_{NN}} = 5.02$ TeV, respectively, are presented in six ranges of collision centrality. The PbPb nuclear modification factor is constructed with a measured pp reference, and the XeXe nuclear modification factor is formed with an extrapolated pp reference. Both are found to be heavily suppressed in the most central collisions. The path-length and collision-energy dependence of parton energy loss are probed by comparing these two systems of differing size. The data are also compared to various theoretical models, as well as previous measurements at lower collision energies. The pPb nuclear modification factor is constructed using a measured pp reference and is seen to be slightly above unity for the highest transverse momentum probed by the measurement. This illustrates contributions due to initial-state effects, such as anti-shadowing in the nuclear parton distribution functions.

Summary

Presenter: BATY, Austin Alan (Massachusetts Inst. of Technology (US))

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