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Longitudinal Fluctuations in Heavy Ion Collisions with the ALICE Detector RAQUEL QUISHPE, University of Houston, ALICE COLLABORATION — Anisotropic flow in relativistic heavy-ion collisions has been studied as a signature of thequark gluonplasma (QGP). For different colliding systems,anisotropicflow has been described by the decomposition of azimuthal correlations into Fourier coefficients. Furthermore, it has been observed that longitudinal correlations also show anisotropies in the medium, which may give further constrains to the QGP and the initial state. These longitudinal correlations can be analyzed and described by orthogonal polynomials, such as Legendre Polynomials. Results from longitudinal correlations coefficients, a_n, are presented for Xe-Xe ($\sqrt{s_{NN}}$ = 5.44 TeV) and Pb-Pb ($\sqrt{s_{NN}}$ = 5 TeV) collisions at the LHC.

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