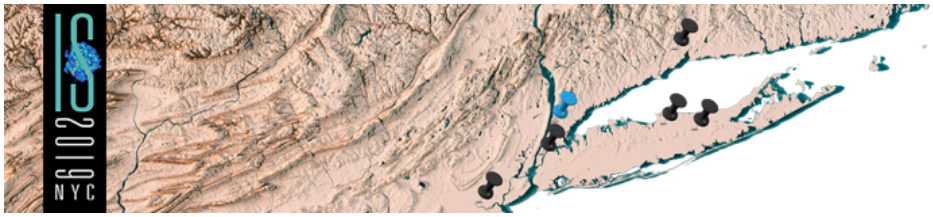

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Measurement of elliptic and triangular flow with multiparticle correlations in pPb collisions at 8.16 TeV

Wednesday, 26 June 2019 16:30 (20 minutes)

The second- and third-order azimuthal anisotropy Fourier harmonics are studied in pPb collisions at $\sqrt{s_{\mathrm{NN}}} = 8.16$ TeV over a wide range of event multiplicities. Multiparticle correlations are used to isolate global properties stemming from the collision overlap geometry. The second-order, elliptic" harmonic moment is obtained with high precision through four-, six-, and eight-particle correlations and, for the first time, the third-order,triangular" harmonic moment is studied using four-particle correlations. A sample of peripheral PbPb collisions at $\sqrt{s_{\mathrm{NN}}} = 5.02$ TeV that covers a similar range of event multiplicities to the pPb results is also analyzed. Model calculations of initial-state fluctuations in pPb and PbPb collisions can be directly compared to the high precision experimental results. This work provides new insight on the fluctuation-driven geometry at the earliest stages of heavy ion collisions.

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