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Azimuthal anisotropy Fourier harmonic correlations and initial-state fluctuations from HYDJET++ and AMPT modela

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Azimuthal anisotropy correlations between different Fourier harmonics, v_2, v_3, and v_4 measured with two-particle correlations in simulated PbPb collisions at $\sqrt{s_{\rm NN}} = 2.76$ TeV, generated with HYDJET++ and AMPT generator, are presented. The results are compared with data from the ATLAS experiment. Both models are in good agreement with data for v_2-v_3 correlation. For v_2-v_4 and v_3-v_4 correlations AMPT model is still in good agreement with experimental observations, while HYDJET++ gives stronger slopes with respect to the ones observed by the ATLAS collaboration. Further, initial-state fluctuations from HYDJET++ model are measured in PbPb collisions at $\sqrt{s_{\rm NN}} = 5.02$ TeV by comparing v_2 results obtained with different Q-cumulant order, $v_2\{2\}$, $v_2\{4\}$, $v_2\{6\}$, and $v_2\{8\}$. The model calculation shows good qualitative and rather good quantitative agreement with results reported by the CMS experiment.

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