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## Anisotropic flow in event-by-event ideal hydrodynamic simulations of $\sqrt{s_{NN}}=200$ GeV Au+Au collisions

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We calculate flow observables with the NeXSPheRIO ideal hydrodynamic model and make the first comparison to the complete set of mid-rapidity flow measurements made by the PHENIX collaboration in top energy Au+Au collisions. A simultaneous calculation of  $v_2$ ,  $v_3$ ,  $v_4$ , and the first event-by-event calculation of quadrangular flow defined with respect to the  $v_2$  event plane ( $v_4\{\psi_2\}$ ) gives good agreement with measured values, including the dependence on both transverse momentum and centrality. This provides confirmation that the collision system is indeed well described as a quark-gluon plasma with an extremely small viscosity, and that correlations are dominantly generated from collective effects. In addition we present a prediction for  $v_5$ .

Reference: arXiv:1203.2882

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