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Volume 982, February 2019, Pages 395-398Measurement of anisotropic flow in XeXe collisions at 5.44 TeV with the CMS experiment (Article) [\(Open Access\)](#)

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Abstract

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New measurements of anisotropic flow in XeXe collisions at a center-of-mass energy of 5.44 TeV per nucleon pair, collected by the CMS experiment at the LHC, are presented. The v_2 , v_3 and v_4 Fourier coefficients of the anisotropic azimuthal distribution are obtained employing three different analysis techniques: two-particle correlations, the scalar product method, and multiparticle cumulants, which have different sensitivities to non-flow and flow fluctuation effects. The results are shown as a function of transverse momentum (p_T) for various centrality selections, and compared with corresponding results from PbPb collisions. These new measurements in a smaller nucleus-nucleus system than PbPb provide additional insights into the system-size dependence of the collective flow induced by the dominant collision geometry and its fluctuations. In particular, these results, compared to theoretical predictions and Monte Carlo generators, will provide important details on the system size dependence of the medium response in heavy ion collisions. They also offer a unique opportunity to study the onset of flow from small to large systems. © 2018

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