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Anisotropic flow of identified particles in Pb-Pb collisions at 2.76 TeV measured with ALICE at the LHC

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The anisotropic flow of identified particles is an important observable to probe the freeze-out properties, the parton energy loss and the partonic phase of the system created in heavy-ion collisions. We report on the elliptic and triangular flow measurements for a number of identified particles such as charged pions, kaons and (anti-)protons, as well as K_0^* , Λ /anti- Λ , Ξ , and Ω . The results are reported at mid-rapidity, $|\eta| < 0.8$, over a wide range of transverse momenta, $0.2 < p_t < 16$ GeV/c, for Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV recorded by ALICE at the LHC. The mass splitting and the scaling properties of the elliptic and triangular flow with the number of constituent quarks and the particle transverse mass are studied as a function of collision centrality. The results are compared to RHIC measurements and to hydrodynamic model predictions.

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