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ATLAS measurements of azimuthal anisotropy of heavy flavor hadrons in Pb+Pb, p +Pb and pp collisions

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ATLAS measurements of azimuthal anisotropy and suppression of muons from heavy flavor decays in Pb+Pb collisions are presented. The measurements are extended to smaller systems of p +Pb and pp collisions, where no significant modification of the heavy flavor production are observed. In the smaller systems, a template fit method is used to subtract non-flow contributions using simultaneous fit to low and high charged-particle multiplicity samples. The heavy flavor flow in p +Pb is studied using multiple probes, including prompt D^0 mesons, J/ψ , and muons from semi-leptonic decays of heavy flavor hadrons. In pp collisions, new measurements of flow coefficient of muons from heavy flavor decays are also presented. The observed heavy flavor azimuthal anisotropies in p +Pb and pp collisions are found to be qualitatively similar to those of light hadrons indicating a similar origin for both types of particles.

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