

Proton directed flow relative to the spectator plane in Ag+Ag collisions at 1.23A and 1.58A GeV with HADES

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We report a new measurement of proton directed flow v_1 relative to the spectator plane for Ag+Ag collisions at the beam energies of 1.23A and 1.58A GeV recorded by the HADES experiment at GSI. The projectile spectator plane is estimated using signals of the charged fragments registered with the HADES forward hodoscope. Directed flow is presented differentially as a function of transverse momentum and rapidity in different centrality classes. The slope of v_1 at midrapidity, dv_1/dy , is reported as a function of centrality and collision energy. The new results extend the existing data available from the previous HADES measurements of directed flow in Au+Au collisions at the beam energy of 1.23A GeV. Sensitivity of the directed flow to the initial angular momentum and connection with the measurement of the lambda hyperon directed flow and global polarization are discussed.

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