

Flow analysis with event-plane method using the VZERO detector in Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV collected by the ALICE experiment at the LHC

Measurement of the azimuthal anisotropy of charged particles produced in heavy-ion collisions is one of the most powerful tools to study the properties of QCD Matter.

An analysis of charged hadron flow in Pb-Pb data taken by the ALICE experiment at $\sqrt{s_{NN}}=2.76$ TeV will be discussed. The event plane [1] was reconstructed using the VZERO detector (two scintillator arrays covering pseudorapidity range $2.8 < \eta < 5.1$ and $-3.7 < \eta < -1.7$) whose large pseudorapidity gap from the central tracking system ($-0.8 < \eta < 0.8$) helps to reduce non-flow contributions.

Emphasize is given to the azimuthal anisotropy of charged particles, characterized by the Fourier coefficients, up to high transverse momenta.

[1] A. M. Poskanzer and S. A. Voloshin, Physical Review C 58, 1671-1678 (1998).

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