

Event fluctuation of charged particle eccentricity and elliptic flow in Pb-Pb collisions at $\sqrt{s}=2.76$ TeV

Thursday, 18 September 2014 10:00 (30 minutes)

We employed the new issue of a parton and hadron cascade model PACIAE 2.1 to systematically investigate the charged particle elliptic flow parameter v_2 and eccentricity ϵ_2 in the relativistic Pb-Pb collisions at 2.76 TeV. With randomly sampling the transverse momentum x and y components of the particles generated in string fragmentation on the circumference of an ellipse instead of circle originally in PACIAE 2.0, the calculated charged particle probability density distribution of v_2 and ϵ_2 as well as their relative fluctuations reproduce the corresponding ATLAS data well.

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