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Anisotropic flow measurement from NA61/SHINE and NA49 experiments at CERN SPS

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Abstract:

The NA61/SHINE experiment at the CERN SPS recently extended its program for the energy scan with Pb ions in the energy range of 13-150A GeV/c. In the year 2016 a sample of Pb-Pb collisions at 13 and 30A GeV/c was collected by the NA61/SHINE experiment. The NA61/SHINE measurements with Pb ions and the experimental techniques using spectators at the lowest energy available at the SPS are also relevant for the preparation of the Compressed Baryonic Matter (CBM) heavy-ionâ ϵ experimentâ ϵ atâ ϵ theâ ϵ futureâ ϵ FAIRâ ϵ facilityâ ϵ inâ ϵ Darmstadt.

We present results on direct and elliptic flow measurement in Pb-Pb collisions at 30A GeV/c relative to the spectator plane determined with the Projectile Spectator Detector. Also a new analysis of 40A GeV/c data collected by the NA49 experiment in year 2000 using forward spectator calorimeters (VETO and RCAL) are presented. The flow coefficients are reported as a function of rapidity and transverse momentum in different classes of collision centrality. The new results are compared with existing results from previous NA49 analysis and the STAR data at RHIC.

Summary

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Session Classification: Collective flow and correlations