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Measurement of harmonic flow and particle correlations in lead-lead collisions at $\sqrt{s_{NN}}=2.76$ TeV from ATLAS

Friday 6 July 2012 11:00 (15 minutes)

This talk will present the results of the azimuthal anisotropy of charged particle production and two particle correlations in Pb + Pb collisions measured with the ATLAS experiment. The results are obtained with multi-particle correlations and compared with the event plane method. A complete set of v_n harmonics measured from central to peripheral events covers a pseudo-rapidity range of $|\eta| < 2.5$ and a transverse momentum range $0.5 < p_T < 20$ GeV. A comparison of the event plane and particle correlation methods allow to uniquely evaluate non-flow effects as well as the size of flow fluctuations. The v_1 flow and scaling of integrated elliptic flow, down to very low- p_T , will be discussed and compared to results of lower energy experiments.

Author: Dr GIANOTTI, Fabiola (CERN (CH))

Presenter: Prof. DUCHOVNI, Ehud (Weizmann Institute of Science (IL))

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