## Quark Matter 2012



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## Event by event di-hadron correlations in Pb-Pb 2.76 TeV collisions from the ALICE experiment

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The large multiplicities at the LHC permit flow harmonics to be determined on an event by event basis in Pb+Pb collisions. We extract these harmonics from inclusive event by event di-hadron correlations, where the minimum track pT is larger than 0.15 GeV. Within a fine centrality bin, we find the correlation function varies substantially on an event by event basis, indicating large fluctuations in the initial conditions for a given impact parameter. Such large fluctuations lead to some events being highly triangular or highly elliptical, where the angular correlation function is completely dominated by the respective cos(2#delta#phi) and cos(3#delta#phi) terms. We will show the 2D inclusive correlation function for such events, and access the covariance between different harmonics. Finally, we will present first measurements of the full v2 distribution for various centralities, and report the higher moments. Implications for our understanding of the initial conditions will be discussed.

Primary author: ALICE, Collaboration (CERN, Geneva, Switzerland)
Co-author: TIMMINS, Anthony Robert (University of Houston (US))
Presenter: TIMMINS, Anthony Robert (University of Houston (US))
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