Contribution ID: **707** Type: **Poster**

Long-range two-particle correlations with K0s and Lambda in pPb and PbPb collisions in CMS

Tuesday 20 May 2014 16:30 (2 hours)

Measurements of two-particle correlations with identified K^0_s and Lambda trigger particles in 5.02 TeV pPb and 2.76 TeV PbPb collisions are presented. One unique feature of this analysis is the implementation of a high-multiplicity trigger during the 2013 LHC pPb run, which enables the correlation studies to be performed up to a multiplicity range that is comparable to mid-central PbPb collisions at 2.76 TeV. Performance of the K^0_s and Lambdas reconstruction at CMS is presented. The second-order (v_2) and third-order (v_3) anisotropy harmonics of K^0_s and Lambda are extracted from long-range correlations as a function of particle multiplicity and pT. The wide pT coverage and rich sample of high multiplicity pPb events allow: (1) a precise examination of the mass ordering effect of v_n at low pT as predicted by hydrodynamics for a collectively expanding medium; (2) exploration of possible constituent quark number scaling of v_2 and v_3 between mesons and baryons as was observed in high-energy nucleus-nucleus collisions.

On behalf of collaboration:

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Session Classification: Poster session

Track Classification: Correlations and Fluctuations