

## **Recent heavy ion results from ATLAS experiment**

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An overview of the recent results from the ATLAS experiment measuring collisions of relativistic heavy ions is presented. The results were obtained with 2012-13 proton-lead runs at  $\sqrt{s_{NN}} = 5.02$  TeV with integrated luminosity of approximately  $30 \text{ nb}^{-1}$  and lead-lead data recorded in 2010-11 LHC at  $\sqrt{s_{NN}} = 2.76$  TeV with integrated luminosity of approximately  $0.15 \text{ nb}^{-1}$ . The talk will discuss recently measured similarities in two particle correlations observed both collisions system and their possible relation to collective dynamics. New constraints on the initial geometry models and on hydrodynamic evolution of the system are coming from the probability distributions of anisotropic flow coefficients measured on the event-by-event basis. Measurements of the bulk particle production are complemented with a detailed studies performed with high- $p_T$  probes. The new results include the first analysis of the forward jet production in proton-lead collisions and a detailed study of high- $p_T$  charged hadrons, jets and electroweak bosons measured by the ATLAS experiment. Yields of electro-weak probes are found to be consistent with binary collision scaling for all collision centralities. On the contrary, charged hadrons, heavy quarks and jets are suppressed in central collisions relative to peripheral events. These measurements, supplemented with the results on correlations between electro-weak probes and jets, provide new insights into the mechanism of in-medium parton energy loss.