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Flow and correlation measurement in d+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV at PHENIX experiment

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The small collision systems have been considered too small to create hot and dense matter. However, this assumption has been challenged with the recent measurements of elliptic flow and long-range angular correlation in d+Au and p+Pb collisions at RHIC and LHC. In order to understand whether hot and dense matter can be created in small collision systems or not, we have done more detailed measurements of flow and long-range angular correlation.

In this poster, we report the measurements of azimuthal correlation between rapidity separated hadrons, and elliptic flow coefficient v_2 for charged hadrons using three methods: event plane method, two particle correlation method and reference fitting method in d+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV. The analysis utilizes PHENIX central arm spectrometers plus various forward detectors with focus on rapidity and rapidity-gap dependence of the extracted elliptic flow coefficients.

On behalf of collaboration:

PHENIX

Primary author: YAMAMOTO, Hiroki (University of Tsukuba (JP))

Presenter: YAMAMOTO, Hiroki (University of Tsukuba (JP))

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