

1 **Measurement of directed flow at forward and backward pseudorapidity in Au+Au**
2 **collisions at $\sqrt{s_{NN}} = 27$ GeV with the Event Plane Detector at STAR**

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6 Directed flow (v_1) describes the collective sideward motion of produced particles and nuclear
7 fragments in heavy-ion collisions. The pseudorapidity (η) dependence of v_1 can provide unique
8 constraints on the initial conditions and dynamical evolution of the Quark Gluon Plasma (QGP).
9 Directed flow in both spectator and participant regions is sensitive to early non-equilibrium
10 dynamics and may provide insights into the baryon stopping mechanism. In 2018, the Event
11 Plane Detector (EPD, $2.1 < |\eta| < 5.1$) was installed in STAR and used for the Beam Energy
12 Scan phase-II (BES-II) data taking. The combination of EPD and high statistics BES-II data
13 enables us to extend the v_1 measurement to the forward and backward η regions, allowing us
14 to verify the phenomenon of limiting fragmentation. In this talk, I will discuss the techniques
15 for measuring v_1 with a scintillator detector like EPD, present v_1 over ten units of η in Au+Au
16 collisions at $\sqrt{s_{NN}} = 27$ GeV and compare the results with the UrQMD model.