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

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The measurement of pseudorapidity (η) dependence of directed flow (v_1) can provide unique constraints on the three-dimensional initial conditions in heavy-ion collisions. In the year 2018, the Event Plane Detector (EPD, $2.1 < |\eta| < 5.1$) was installed in STAR and used for the Beam Energy Scan phase-II (BES-II) data taking. The combination of EPD and high statistics BES-II data enables us to extend the v_1 measurement to the very forward and backward psuedorapidity regions. In this poster, we will discuss the techniques for measuring v_1 with a scintillator detector like EPD and present results of v_1 in Au+Au collisions at $\sqrt{s_{NN}} = 27$ GeV. We will also compare the results to different models such as AMPT, UrQMD, and hydrodynamic simulations.