Rapidity Dependence of Pion Elliptic Flow at RHIC

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The measured elliptic flow (v2) of identified particles as a function of p_t and centrality at RHIC suggests the created medium in Au+Au collisions achieves early local thermal equilibrium that is followed by hydrodynamic expansion. These measurements of identified particle v2 have been limited, however, to a narrow region about mid-rapidity. Charged-hadron v2 measurements show a significant reduction at forward pseudorapidities. It is not known if this η dependence is a general feature of elliptic flow, or reflects other changes in the particle spectra in going to the forward region. The BRAHMS experiment provides unique capabilities to measure v2 at forward rapidities. Using the BRAHMS multiplicity array to determine the v2 event plane, identified particle elliptic flow can be measured using the BRAHMS spectrometers, with $0< \eta<3.4$. This talk will discuss pion elliptic flow at $\eta= 0$, 1, 2.7 and 3.4 from Run 4 Au+Au collisions at $\sqrt{s_{nn}}=200$ GeV. In addition, the p_t-integrated flow for charged hadrons obtained using just the multiplicity array will be presented.