

Abstract Submitted
for the OSS13 Meeting of
The American Physical Society

Fluctuating flow angles and anisotropic flow measurements in heavy-ion collisions¹ ULRICH HEINZ, ZHI QIU, CHUN SHEN, The Ohio State University — Event-by-event fluctuations in the initial density distributions of the fireballs created in relativistic heavy-ion collisions lead to event-by-event fluctuations of the final anisotropic flow angles, and density inhomogeneities in the initial state cause these flow angles to vary with the transverse momentum of the emitted particles. It is shown that these effects lead to characteristically different transverse momentum dependencies for anisotropic flow coefficients extracted from different experimental methods. These differences can be used to experimentally constrain flow angle fluctuations in the final state of heavy-ion collisions which, in turn, are sensitive to the initial state density fluctuations and the shear viscosity of the expanding fireball medium.

¹Supported by DOE grants DE-SC0004286 and DE-SC0004104 (JET Collaboration).

Ulrich Heinz
The Ohio State University

Date submitted: 25 Feb 2013

Electronic form version 1.4