Department of Theoretical Physics

Free Meson Seminar

Speaker	:	Jean-Yves Ollitrault (Institut de Physique Theorique, CEA-Saclay)
Topic	:	Triangular flow in heavy-ion collisions
Day, Date & Time	:	Thursday, August 5, 2010 at 2:30 p.m.
Place	:	AG 69

Abstract

Correlations between particles produced in ultrarelativistic heavy-ion collisions have been thoroughly studied experimentally, because they reveal interesting patterns which are specific to nucleus-nucleus collisions. The best known of these correlations is elliptic flow. More recently, additional structures have been identified in azimuthal correlations on top of elliptic flow. These structures are referred to as "ridge" and "shoulder", and they have triggered a lot of theoretical activity. It has been recently argued by Alver and Roland that both the ridge and the shoulder are natural consequences of the triangular flow (v3) generated by a triangular fluctuation of the initial distribution. In this talk, I show quantitative results from viscous hydrodynamics which support this hypothesis. Our calculations reproduce both the magnitude and the centrality dependence of v3 extracted from existing correlation data.

(Nilmani Mathur)