

Department of Theoretical Physics

Free Meson Seminar

<i>Speaker</i>	:	Guy D. Moore (McGill University, Montreal, Canada)
<i>Topic</i>	:	Bulk viscosity and its Spectral function in QCD
<i>Day, Date & Time</i>	:	Thursday, September 4, 2008 at 2:30 p.m.
<i>Place</i>	:	AG 69

Abstract

Bulk viscosity characterizes the deviation below equilibrium pressure of an expanding system. The bulk viscosity of the Quark-Gluon Plasma plays a role in the dynamics of heavy ion collisions and may be measurable. We compute the bulk viscosity and the full frequency response of the pressure operator in QCD in two regimes which are analytically tractable: weak coupling and near the 2'nd order phase transition point in the temperature-chemical potential plane. Then we remark on what our results teach us about the difficulty of reconstruction of bulk viscosity and other transport properties from Euclidean (lattice) correlation functions.

(Saumen Datta)