Organisé conjointement par
CPHT-École Polytechnique et Groupe Théorie IPN Orsay

SÉMINAIRE de PHYSIQUE des PARTICULES

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Real-time dynamics near a critical point

Résumé :
Ever since the discovery of the quark-Gluon plasma (QGP) the location of the critical point in the QCD phase diagram - the end point of the first-order transition between hadron matter and QGP - has been a main research goal for heavy-ion collison experiments. We use the gauge/gravity duality to study as first a four-dimensional, strongly-coupled gauge theory with a first-order thermal phase transition. In the dual gauge theory we calculate the evolution and saturation of the spinodal instability. We uncover a new surprising example of the applicability of hydrodynamics to systems with large gradients. We discover with shockwave collisions that in theories with a first-order phase transition, a long-lived, quasi-static state may be formed.

Mardi 20 Novembre 2018

11:00

Salle de conférences Louis Michel, bât. 6