



## The Galileo Galilei Institute for Theoretical Physics Arcetri, Florence



*Jo Galileo Galilei*

The main topics of the program include:

1. Non-equilibrium and equilibrium quark and gluon systems
  - a. The nature of the QGP as seen at RHIC
  - b. Techniques for treating non-equilibrium high density QCD
  - c. The approach to equilibrium after a heavy ion collision
2. QCD evolution near the unitarity limit
  - a. The Color Glass Condensate
  - b. Relation with reaction-diffusion processes in statistical physics
  - c. The relationships among heavy ion collisions, deep inelastic electron scattering and high energy p-p and p-A collisions

### High Density QCD - January 15-March 9, 2007

With an associated ECT\*workshop in Trento - January 8-12, 2007

With a successful experimental program continuing at Brookhaven and a new ultra high energy program about to start at CERN, heavy ion collisions are offering a rich variety of experimental input for the study of high density QCD. This is an opportune time to review the theoretical states and to try better to understand where progress is likely to be made in equilibrium and non-equilibrium high density QCD. The focus of the program will be the review and study of techniques useful for understanding high density QCD and the information about these techniques available from other branches of particle, nuclear and statistical physics. The GGI program will be preceded by a workshop at the ECT\* in Trento, "High Energy QCD: from RHIC to LHC" organized by D. d'Enterria, F. Gelis and E. Iancu which will serve as the opening conference for this program and which will summarize the experimental and theoretical states of the field and highlight the outstanding issues.

Organizers: **Jean-Paul Blaizot** (ECT\*, Trento and CNRS), **Luciano Maiani** (University of Rome, La Sapienza) and **Alfred Mueller** (Columbia University)