

## Quest for the QCD phase diagram in extreme environments

*Tuesday, 19 June 2012 09:00 (30 minutes)*

Hot and dense matter out of quarks and gluons forms various status with external parameters such as the temperature, the chemical potential, the magnetic field, etc turned on and changed. The phase transitions are characterized by realization of symmetries but the phase structure highly depends on the dynamical properties of matter. In this talk I will focus particularly on recent developments in the understanding of phase transitions based on the knowledge on confinement in the vacuum in the Landau gauge. Also I will talk about some speculative identification of the ground state of quark matter in the limit of strong magnetic field.

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