

KMI Colloquium

Frontiers of Quark-Gluon Plasma Physics with high-energy heavy-ion collisions



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Abstract:

Quark-Gluon-Plasma is a new state of matter, composed of de-confined quarks and gluons, thought to have existed right at the birth of the universe. The existence of such a new matter and its properties give us the key insights of the fundamental QCD and key information on the understanding of color confinement and of chiral-symmetry restoration.

Relativistic heavy-ion collisions have been conducted at the Relativistic Heavy Ion Collider (RHIC) and more recently at the Large Hadron Collider (LHC) over the past decade. Huge advances in experimental measurements have been made at RHIC and LHC and have led to a deep knowledge of the many-body QCD system at high temperature regime, in conjunction with recent theoretical advances.

In this Colloquium, recent progress in the Quark-Gluon Plasma Physics and future plans of the heavy-ion collisions experiments including my activities will be presented.

