Contribution ID: **103** Type: **not specified**

The 174th HENPIC seminar by Prof. Guang-You Qin (秦广友)

Title: Jets and heavy flavors in heavy-ion collisions

Abstract: When the matter is heated up to 2 trillion degrees Kelvin, the quark-gluon plasma (QGP) can be formed. Such new state of matter consist of deconfined quarks and gluons, which are ordinarily confined inside nucleons or other hadrons. It is believed that shortly after the Big Bang, the early universe was filled with hot and dense QGP. The primary goal of relativistic heavy-ion collisions is to create QGP in the laboratories, to study its novel properties and to explore the phase structure of strong-interaction matter under extreme conditions. Jets and heavy flavors provide very important tools to probe the macroscopic properties and microscopic structures of quark-gluon plasma created in high-energy nuclear collisions. In this talk, I will present some recent theoretical and phenomenological studies on jet quenching, medium response and heavy flavor dynamics related to the Relativistic Heavy-Ion Collider and the Large Hadron Collider.

Summary