Contribution ID: **125** Type: **口头报告**

Flavor Hierarchy of Jet Energy Correlators inside the Quark-Gluon Plasma

Sunday, 27 April 2025 11:30 (20 minutes)

Heavy flavor jets provide ideal tools to probe the mass effect on jet substructure in both vacuum and quark-gluon plasma (QGP). Energy-energy correlator (EEC) is an excellent jet substructure observable owning to its strong sensitivity to jet physics at different scales. We perform a complete realistic simulation on medium modification of heavy and light flavor jet EEC in heavy-ion collisions. A clear flavor hierarchy is observed for jet EEC in both vacuum and QGP due to the mass effect. The medium modification of inclusive jet EEC at different angular scales exhibits very rich structure: suppression at intermediate angles, and enhancement at small and large angles, which can be well explained by the interplay of mass effect, energy loss, medium-induced radiation and medium response. These unique features of jet EEC are shown to probe the physics of jet-medium interaction at different scales, and can be readily validated by upcoming experiments.

Primary authors: Prof. QIN, Guang-You (Central China Normal University); Prof. CAO, Shanshan (Shandong University); Dr XING, Wen-Jing (South China University); Prof. WANG, Xin-Nian (Central China Normal University)

Presenter: Dr XING, Wen-Jing (South China University)

Session Classification: 分会场二