Contribution ID: **47** Type: **oral contribution**

Initial geometry effect on HBT correlation in C+Au collisions in AMPT model

Friday, 24 August 2018 16:25 (15 minutes)

In high-energy nuclear physics, the property of quark gluon plasma is a key target. In traditional nuclear physics, the structure of light nuclei is always an important field. In recent years, it has been proposed that relativistic heavy-ion collision also offers a possibility of studying low-energy nuclear structure phenomena. Through ^{12}C+^{197}Au collisions from the AMPT model, the azimuthal angle dependence of correlation lengths (the Hanbury Brown-Twiss radii) is calculated. Three configurations of ^{12}C are considered, which are α-clustered triangle, α-clustered chain and Woods-Saxon distribution of nucleons. The evolution of the angular distribution of the HBT radii from pion-pion correlation and phi-phi correlation is discussed. From our study, one can learn that the HBT correlation from identical particles at freeze-out is able to distinguish the different initial configurations and hadronic rescattering time plays an important role in the evolution.

Primary author: Mr HE, Junjie (Shanghai Institute of Applied Physics, Chinese Academy of Sciences)

Presenter: Mr HE, Junjie (Shanghai Institute of Applied Physics, Chinese Academy of Sciences)

Session Classification: YSS