

International Mini-Workshop on Heavy-Ion Collisions and Phase Structure of Nuclear Matter

Report of Contributions

Contribution ID : 2

Type : **not specified**

2D jet tomography and asymmetric jet shape

Medium-modified jet shape is studied with a linear Boltzmann transport model for event-by-event simulations of γ -jet productions in heavy-ion collisions. The asymmetry ($A_N^{\vec{q}}$) is shown to increase with the initial transverse positions when the gradient of jet transport coefficient (\hat{q}) increases until at the edge of the nonuniform medium. On one hand, compared to γ -jets selected by the large $A_N^{\vec{q}}$, the jet shape of γ -jets selected by the small $A_N^{\vec{q}}$ is fat for the transverse momentum transported toward the outer layer of the jet cone due to strong medium effect of volume emissions. On the other hand, the jet shape with relatively large jet transverse momentum (p_T^{jet}) is thin due to surface emissions of the initial jets whose moving directions are perpendicular to the medium surface. Our numerical results give the 2-Dimension jet tomography and the asymmetric jet shape in heavy-ion collisions.

Primary author(s) : ZHANG, Hanzhong

Co-author(s) : HE, Yayun; PANG, Long-Gang; XIAO, Yu-Xin; WANG, Xin-Nian

Presenter(s) : ZHANG, Hanzhong

Contribution ID : 4

Type : **not specified**

Opening

Saturday, 22 July 2023 08:30 (30)

Presenter(s) : Prof. MA, Yu-Gang; Prof. ZHAO, Qiang

Contribution ID : 5

Type : **not specified**

Reflections on Works with Chinese Aggies

Saturday, 22 July 2023 09:00 (40)

Presenter(s) : Prof. KO, Che-Ming (Texas A&M University)

Contribution ID : 6

Type : **not specified**

Trace baryon number transport and fluctuation

Saturday, 22 July 2023 09:40 (25)

Presenter(s) : Prof. XU, Zhang-Bu

Contribution ID : 7

Type : **not specified**

Semi-analytical calculation of densities and trajectory of nuclear collisions

Saturday, 22 July 2023 10:35 (25)

Presenter(s) : Prof. LIN, Zi-Wei

Contribution ID : 8

Type : **not specified**

Vector meson global spin alignment in heavy-ion collisions

Saturday, 22 July 2023 11:00 (25)

Presenter(s) : Prof. CHEN, Jin-Hui

Contribution ID : 9

Type : **not specified**

Constraining QGP properties using heavy quarks

Saturday, 22 July 2023 11:25 (25)

Presenter(s) : Prof. CAO, Shan-Shan

Contribution ID : **10**

Type : **not specified**

Medium effects on pion production in intermediate-energy heavy -ion collisions

Saturday, 22 July 2023 11:50 (25)

Presenter(s) : Prof. ZHANG, Zhen

Contribution ID : 11

Type : **not specified**

Rendezvous with the QGP: Jet Observables

Saturday, 22 July 2023 14:00 (25)

Presenter(s) : Prof. ZHANG, Ben-Wei

Contribution ID : 12

Type : **not specified**

2D jet tomography and asymmetric jet shape

Saturday, 22 July 2023 14:25 (25)

Presenter(s) : Prof. ZHANG, Han-Zhong

Contribution ID : 13

Type : **not specified**

Partonic critical opalescence and its effect on jet quenching

Saturday, 22 July 2023 14:50 (25)

Presenter(s) : Prof. LI, Feng

Contribution ID : 14

Type : **not specified**

Tensor Polarization and Spectral Properties of Vector Meson in QCD Medium

Saturday, 22 July 2023 15:15 (25)

Presenter(s) : Prof. LIU, Shuai

Contribution ID : 15

Type : **not specified**

Heavy quark thermalization in a stochastic Schrödinger equation approach

Saturday, 22 July 2023 16:00 (25)

Presenter(s) : Prof. ZHAO, Xing-Bo

Contribution ID : 16

Type : **not specified**

Bottom hadro-chemistry in high-energy hadronic collisions

Saturday, 22 July 2023 16:25 (25)

Presenter(s) : Prof. HE, Min

Contribution ID : 17

Type : **not specified**

Probing the electromagnetic fields in AA and pA systems

Saturday, 22 July 2023 16:50 (25)

Presenter(s) : Prof. SUN, Yi-Feng

Contribution ID : **18**

Type : **not specified**

Theoretical Progress in High-energy Heavy-ion Collisions at Fudan

Saturday, 22 July 2023 17:15 (25)