

## The 122nd HENPIC seminar by Dr. Anping Huang 黄安平 (Indiana U.), Sep. 17, 2020, Thursday, 10:30 am (UTC+8)

Talk title: Dynamical evolution of magnetic fields in heavy-ion collisions

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Speaker : Dr. Anping Huang (Indiana University)

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Abstract:

The electromagnetic fields in heavy-ion collisions are important ingredients for many interesting phenomena, such as Chiral Magnetic Effect (CME) and the directed flow  $v_1$  of  $D^0$  mesons. A critical and challenging problem in this direction is the dynamical evolution of the magnetic field in the medium. The magnetic fields from the initial colliding nuclei decay very fast in the vacuum. Nevertheless, it has been proposed that its lifetime could be extended through medium response. We focus on the dynamical electromagnetic fields in heavy-ion collisions by numerical solving the Maxwell equations together with the hydrodynamically expanding medium, by assuming negligible backreaction of the fields on the fluid evolution. In this talk, I will present our latest results for the time-dependent magnetic fields in this newly developed framework.

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Self-introduction:

Dr. Anping Huang obtained Ph.D under the supervision of Prof. Pengfei Zhuang from Tsinghua University in 2018. After a first postdoc position at Tsinghua University for 2018-2019, he has been a postdoc researcher at Indiana University since 2019. He has done a number of notable works on quantum kinetic theory, and more recently his research focuses on the dynamical evolution of electromagnetic fields in heavy ion collisions.

**Presenter:** Dr HUANG, Anping