Contribution ID: **797** Type: **Poster**

Heavy quarks dynamics in the early stage of high energy nuclear collisions

Tuesday, 5 September 2023 17:30 (2h 10m)

The early stage of high-energy nuclear collisions is dominated by strong gluon fields called the evolving Glasma. This stage can be probed by heavy quarks (HQs), charm and beauty, since they are produced almost immediately by hard scatterings. We study the propagation of HQs in the evolving Glasma fields, by solving the relativistic kinetic equations that couple the HQs to the fields themselves. We analyze the impacts of this (so far) neglected dynamics on observables, namely the nuclear modification factor and the elliptic flow. We find that both these quantities are affected in a substantial way by the propagation in the early gluon fields.

Category

Theory

Collaboration (if applicable)

Primary authors: Prof. RUGGIERI, Marco (University of Catania); Ms -, Pooja (Indian Institute of Technology Goa); Dr DAS, Santosh (Indian Institute of Technology Goa); Prof. GRECO, Vincenzo (University of Catania)

Presenter: Prof. RUGGIERI, Marco (University of Catania)

Session Classification: Poster Session

Track Classification: Initial state