ID de Contribution: **265** Type: **Poster**

Jet-soft correlations in event-by-event hydrodynamic evolution

mardi 4 juin 2024 19:04 (1 minute)

Collective flow and energy loss are two of the most important tools to study the Quark-Gluon Plasma formed in relativistic heavy ion collisions. Collective flow is usually explored through soft particles correlations while energy loss studies normally uses hard probes, as heavy flavor quarks or jets coming from hard scattering of partons. However, the interplay between these two ways of studying the Quark-Gluon Plasma can have an important role. We expand upon those studies by discussing the dialogue between soft and hard scales via reconstructed jets and their azimuthal flow, as they provide complex insights into medium response and path-length dependence of energy loss.

This contribution employs realistic event-by-event (2+1)D v-USPhydro hydrodynamic profiles with \tr initial conditions, in which JEWEL medium-modified parton showers propagate through. We combine the azimuthal distribution of thermal particles and anti-k_T jets to analyze jet-soft correlations and its features given the event-by-event medium fluctuations and jet quenching. Calculations for jet anisotropic flow coefficients v_n in multiple centralities classes will be shown, providing an extension of established results [1], in addition to jet spectra event-shape engineered collisions compared to newly released ALICE measurements.

[1] L. Barreto, F. M. Canedo, M. G. Munhoz, J. Noronha and J. Noronha-Hostler, "Jet cone radius dependence of R_{AA} and v_2 at PbPb 5.02 TeV from JEWEL+TRENTo+v-USPhydro,"Aug. 2022. [arXiv:2208.02061 [nucl-th]

Auteurs principaux: BARRETO DE OLIVEIRA CAMPOS, Leonardo (University of São Paulo (USP)); DE MORAES CANEDO, Fabio (University of São Paulo (USP)); M. M. PAULINO, Maria (University of São Paulo (USP)); Dr NORONHA-HOSTLER, Jacquelyn (University of Illinois Urbana Champaign); Dr NORONHA, Jorge (University of Illinois Urbana Champaign); Dr G. MUNHOZ, Marcelo (University of São Paulo (USP))

Orateur: BARRETO DE OLIVEIRA CAMPOS, Leonardo (University of São Paulo (USP))

Classification de Session: Posters

Classification de thématique: Bulk matter phenomena, QCD phase diagram and Critical point