

# 11th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



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Typ: Talk

## $R$ -dependence of jet observables with JEWEL+v-USPhydro

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The  $R$ -dependence of jet observables provides a new tool in understanding the interplay between the jet energy-loss mechanism and medium response in heavy-ion collisions. We have coupled the Monte Carlo event generators JEWEL and PYTHIA, with initial conditions from the T<sub>R</sub>ENTo and the state-of-the-art (2+1)D v-USPhydro, for the simulation of jet quenching phenomena in a more realistic medium formed in lead-lead collisions at LHC energy scales.

In this work, we present one of the first studies of the jet nuclear modification  $R_{AA}$  and anisotropic flow coefficients  $v_{n=2,3}$  as a function of the jet cone radius  $R$ , in the context of anti- $k_T$  jets, in addition to jet shape observables. The calculations indicate the impacts of the hydrodynamic evolution and weakly-coupled medium response, given by recoils, on the distributions. Results are compared to experimental data in a wide range of jet  $p_T$  and collision centrality, and displayed along with large jets ( $R \geq 0.6$ ) predictions.

### Experiment/Theory

Theory/Phenomenology

### Affiliation

University of São Paulo (USP), University of Illinois Urbana-Champaign

**Hauptautoren:** Herr 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)); MUNHOZ, Marcelo (University of São Paulo (USP)); Dr. NORONHA, Jorge (University of Illinois Urbana-Champaign); Dr. NORONHA-HOSTLER, Jacquelyn (University of Illinois Urbana-Champaign)

**Vortragende(r):** Herr BARRETO DE OLIVEIRA CAMPOS, Leonardo (University of São Paulo (USP))

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**Track Klassifizierung:** Jets and their modification in QCD matter