

Quark Matter 2019 - the XXVIIIth International Conference on Ultra-relativistic Nucleus-Nucleus Collisions



Contribution ID: 525

Type: **Poster Presentation**

Substructure-based classification of medium-modified jets

Monday 4 November 2019 17:40 (20 minutes)

We study the feasibility of a substructure-based classification of medium-modified jets employing a metric formulated in terms of the earth mover's distance. We aim at isolating a subset of jets measured in p-Pb or Pb-Pb collisions that is characterized by an enhanced dissimilarity to the vacuum sample. The selected jet ensemble can be then inspected by projecting it on any substructure observable of interest such as (groomed) jet mass. A particular question addressed in this contribution is whether fluctuations of the underlying event background dominate the substructure-based difference between jets measured in proton-proton and heavy-ion collisions. For this exploratory classification analysis we employ samples of pp/p-Pb/Pb-Pb track-based jets measured with ALICE at $\sqrt{s_{NN}} = 5.02$ TeV as well as simulated PYTHIA jets embedded in the underlying event background.

Primary author: LAPIDUS, Kirill (CERN)

Presenter: LAPIDUS, Kirill (CERN)

Session Classification: Poster Session

Track Classification: Jet modifications and medium response