10th International Conference on New Frontiers in Physics (ICNFP 2021)



Contribution ID: 31 Type: Talk

Multi-partonic medium induced cascades in expanding media

Monday, 30 August 2021 17:25 (25 minutes)

Going beyond the simplified gluonic cascades, we have introduced both gluon and quark degrees of freedom for partonic cascades inside the medium. We then solve the set of coupled evolution equations with splitting kernels calculated for static, exponentially expanding and Bjorken media to arrive at medium-modified parton spectra for quark and gluon initiated jets. For our calculations, we have included phenomenologically driven parton fractions for the calculation of inclusive jet R_{AA} and its rapidity dependence. Finally, we have studied the path-length dependence of jet quenching for different types of expanding media by calculating the jet v_2 . These studies help to quantify a discriminating power of different observables for distinguishing the type of the medium expansion.

Is this abstract from experiment?

No

Name of experiment and experimental site

N/A

Is the speaker for that presentation defined?

Yes

Details

Souvik Priyam Adhya, Dr., Charles University, Czech Republic, http://ipnp.cz/?page_id=69

Internet talk

Maybe

Primary authors: SALGADO LOPEZ, Carlos Albert (Universidade de Santiago de Compostela (ES)); SPOUSTA, Martin (Charles University); Mr ADHYA, Souvik Priyam (Institute of Particle and Nuclear Physics Faculty of Mathematics and Physics, Charles University); TYWONIUK, Konrad (University of Bergen (NO))

Presenter: Mr ADHYA, Souvik Priyam (Institute of Particle and Nuclear Physics Faculty of Mathematics and Physics, Charles University)

Session Classification: B Heavy Ion Collisions and Critical Phenomena