



Contribution ID: 218

Type: **Parallel Talk**

Nuclear modification of anti-kT jets from $R=0.2$ to $R=1.2$ with the CMS detector

Thursday, 7 July 2022 11:15 (15 minutes)

In heavy ion collisions, the quark gluon plasma, a new state of matter where quarks and gluons are no longer confined in a nucleus, is created. High energy partons created during the initial collision are observed to lose energy through interactions with the plasma. The details of how the energy is transported away from the partons is not fully understood and of great interest. Jet spectra measurement with different resolution parameters is one of the simplest observables and yet provides highly nontrivial insight. In this talk, we report new results on the inclusive jet spectra from CMS with the latest high statistics data, including the results on anti-kT jet spectra spanning the widest range of resolution parameters ever employed in heavy-ion collisions. The accuracy of the result is greatly improved compared to the previous publication on large area jets up to $R = 1.0$. These results shed light on the different mechanisms of parton interactions with the medium.

In-person participation

Yes

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