



Contribution ID: 827

Type: **Poster**

The sPHENIX HF-jet physics program

Tuesday, 15 May 2018 19:10 (30 minutes)

Jets initiating from heavy flavor quarks (HF-jets) are sensitive to the collisional energy loss of high energy partons when traversing through Quark Gluon Plasma. Using sPHENIX, a state-of-the-art jet detector, we will perform the first HF-jet measurements at RHIC, which will include the nuclear modification and flow of b -jets, and the momentum balance in di- b -jet pairs. A variety of b -Jet tagging algorithms have been developed, which select the HF-jet sample rich in tracks displaced from the primary collision point as measured by the high precision sPHENIX MAPS vertex tracker. The detection method, physics projection and possible impact to the field of our understanding of parton energy loss will be discussed in this poster.

Content type

Experiment

Collaboration

sPHENIX

Centralised submission by Collaboration

Presenter name already specified

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Session Classification: Poster Session

Track Classification: Future facilities, upgrades and instrumentation