



Contribution ID: 603

Type: Poster

## Study of heavy-flavor jet measurements with sPHENIX

*Friday 8 April 2022 14:00 (4 minutes)*

Jets including heavy flavor quarks (HF-jets) are mostly produced from initial hard scattering in relativistic heavy ion collisions. Therefore it is a good probe to study the properties of quark gluon plasma produced from heavy ion collisions. Jets initiating from bottom quarks ( $b$ -jets) can be identified by the characteristic of  $b$ -hadrons such as long lifetime and heavy mass. sPHENIX experiment at Relativistic Heavy Ion Collider is designed for precise measurements of  $b$ -jets with a MAPS based vertex tracker (MVTX), and the first run is expected to start in 2023. An extensive simulation study has been performed to develop and test  $b$ -jet tagging algorithms such as secondary vertex method and displaced track counting method. In this poster, simulation studies on  $b$ -jet tagging algorithms and their performance at sPHENIX will be presented.

**Primary author:** LIM, Sanghoon (Pusan National University (KR))

**Presenter:** LIM, Sanghoon (Pusan National University (KR))

**Session Classification:** Poster Session 3 T11\_3

**Track Classification:** Heavy flavors, quarkonia, and strangeness production