

# Identification of heavy-flavor jets in sPHENIX using MAPS

The flavor dependence of jet quenching in the QGP is an important tool to study radiative and collisional energy loss in the medium using probes of different mass scales. B-tagged jet nuclear modification measured at LHC has not shown a parton flavor dependence at high  $p_T$ , where the quark mass is much smaller than the  $p_T$  scale. The proposed sPHENIX experiment at RHIC will measure B-tagged jets at lower  $p_T \sim 10\text{-}30$  GeV/c, closer to the B-quark mass scale than measurements at LHC. Monolithic Active Pixel Sensor (MAPS) technology has been proposed to provide precision displaced vertex measurements in high occupancy heavy ion environments. The implementation of a MAPS detector in sPHENIX, physics performance projections and possible impacts to the field of heavy ion physics will be discussed.

## Preferred Track

Future Experimental Facilities, Upgrades, and Instrumentation

## Collaboration

sPHENIX

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