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Heavy Flavor Program in sPHENIX

The sPHENIX detector at Relativistic Heavy Ion Collider (RHIC) will enable a broad range of high-precision heavy flavor (HF) probes of the quark-gluon plasma (QGP). It is scheduled to start the operation in 2023. A fast MAPS-based silicon vertex detector (MVTX) and precision electromagnetic calorimeter are being constructed to greatly enhance the HF capabilities of sPHENIX. sPHENIX will provide precision bottom and charm measurements over a broad momentum range and a wide selection of final states including quarkonia. These new observables at RHIC will offer quantitative access to the initial magnetic field, characterize QGP transport properties, parton energy loss mechanisms, and enable a detailed understanding of heavy quark hadronization. The recent studies on the heavy flavor at sPHENIX will be discussed in this talk.

Primary author: Prof. OKAWA, Hideki (Fudan University)

Presenter: Prof. OKAWA, Hideki (Fudan University)