



Contribution ID: 856

Type: Poster

sPHENIX high-statistics measurements of D meson production in p+p collisions

sPHENIX is the first new collider detector experiment for heavy-ion physics since the switch on of the LHC and was successfully commissioned during 2023 and 2024. A major feature of sPHENIX is the use of a tracking system capable of streaming readout, enabling the collection of very large, unbiased p+p datasets previously not available at RHIC. Using this ability, sPHENIX recorded over 100 billion p+p collisions at 200 GeV in Run-24. This data sample allows for an open heavy flavor physics program with low- p_T reach and high precision in both the open charm and beauty sectors. This talk will report sPHENIX measurements in the open charm sector, which are expected to include p+p reference cross-sections, ratios of identified yields for heavy flavor hadronization studies, and multiplicity dependence of charm production, all of which can be measured with unprecedented statistics, or even for the first time, at RHIC.

Category

Experiment

Collaboration (if applicable)

sPHENIX Collaboration

Authors: Mr YU, Xudong (Peking University); COLLABORATION, sPHENIX

Presenter: Mr YU, Xudong (Peking University)

Session Classification: Poster session 2

Track Classification: Heavy flavor & quarkonia