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Requirements, Status and plans for track reconstruction of the sPHENIX experiment

Tuesday, April 21, 2020 9:05 PM (25 minutes)

sPHENIX is a new experiment being constructed at the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory. The primary physics goals of sPHENIX are to measure jets, their substructure, and the upsilon resonances in both p+p and Au+Au collisions. To realize these goals, a tracking system composed of a time projection chamber and several silicon detectors will be used to identify tracks corresponding to jets and upsilon decays. However, the sPHENIX experiment will collect approximately 200 PB of data utilizing a finite size computing center, and thus, due to the large occupancy of heavy-ion collisions, track reconstruction in a timely manner remains a challenge. This talk will discuss the sPHENIX experiment, its track reconstruction, and the need for the implementation of faster track fitting algorithms, such as that provided by the ACTS package, into the sPHENIX software stack.

Consider for young scientist forum (Student or postdoc speaker)

Second most appropriate track (if necessary)

Presenter: OSBORN, Joseph (Oak Ridge National Laboratory)

Session Classification: Recording sessions