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sPhenix Tracking Performance Simulations

sPHENIX is an upgrade to the PHENIX detector proposed to explored the quark-gluon plasma formed in heavy ion collisions through measurements of jets and upsilons at RHIC in the 2020's. The experiment will feature a 1.5 Tesla superconducting solenoid magnet which was formerly used by the BaBar experiment. A charged particle tracking system will be placed together with an electromagnetic and hadronic calorimeters spanning full azimuthal coverage and 2 units of central pseudo-rapidity. The tracking system will consist of a Time Projection Chamber (TPC) with a GEM-based readout, an intermediate silicon strip tracker (INTT), and a MAPS (Monolithic Active Pixel Detector) micro-vertex detector. The current status of the tracker simulation studies and key performance results will be presented.

Preferred Track

Future Experimental Facilities, Upgrades, and Instrumentation

Collaboration

sPHENIX

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