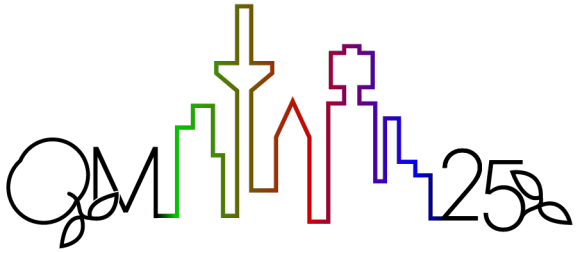

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sPHENIX Performance of the Intermediate Si tracker

sPHENIX is a second generation RHIC experiment, designed for precise measurements of QGP properties and the nature of the proton spin structure. The Intermediate Si Tracker (INTT) is a two-layer cylindrical tracker using Si strip sensors, with strip size is 78 um x 1.6 cm. The INTT plays a key role for the charged particle tracking and the determination of a collision time. For these purposes, the INTT has capability to process data in each beam crossing.
The collision time is necessary not only for solving the pile-up of multiple collisions in a time frame, but also for determining the spin direction of the collision in polarized p+p data-taking. The INTT can also determine the collision vertex using reconstructed tracklets.
sPHENIX recorded 200 GeV p+p and Au+Au collision data in 2024. The INTT was operated in extended trigger mode and streaming mode. These modes allowed us to collect more collision data in addition to the triggered events.
In this poster, we will report the INTT operation in 2024, and discuss the INTT performance including the track reconstruction, the vertex determination, MIP measurements, and the capability of the collision time determination.

Category

Experiment

Collaboration (if applicable)

sPHENIX Collaboration

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