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The Intermediate Silicon Tracker of sPHENIX

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The sPHENIX project is a new detector experiment at the Relativistic Heavy Ion Collider at BNL. Its aim is to study strongly interacting Quark-Gluon Plasma and cold-QCD by measuring photons, jets, jet correlations, and Upsilon family with high precision. To achieve these goals, a precise tracking system is necessary. The tracking system of the sPHENIX detector consists of the MVTX, TPC, TPOT, and the Intermediate Silicon Tracker (INTT). The INTT is a two-layer barrel silicon tracker that plays a unique role among the tracking detectors. It is capable of bridging the tracks of the MVTX and the TPC. In addition, its precise timing resolution enables the INTT to associate individual tracks and events to eliminate pile-up events. The INTT barrel installation and cabling were completed in March 2023. We have since commissioned and confirmed installation procedures and detector responses. The INTT status, performance evaluation by collision data, and calibration test results are presented in this poster.

Category

Experiment

Collaboration (if applicable)

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