

Construction and Installation of the PHENIX silicon pixel vertex tracker

A silicon vertex tracker (VTX) is one of the upgrade programs in the PHENIX experiment to measure the production of heavy (charm and bottom) quarks in Au+Au and polarized p+p collisions. The production of heavy quarks is a powerful tool to study both the properties of a dense partonic matter created in high energy heavy ion collisions and the gluon contribution to the spin structure of proton in polarized p+p collisions. The VTX provides the precise measurement of heavy flavors and a clear separation of charm and bottom contributions.

The VTX comprises the four layers of the barrel detectors. The two inner layers consist of silicon pixel detectors and the two outer layers consist of silicon stripixel detectors. The VTX was constructed and installed during the shutdown period of year 2010.

In this poster presentation, we report the details of the VTX construction and installation.

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