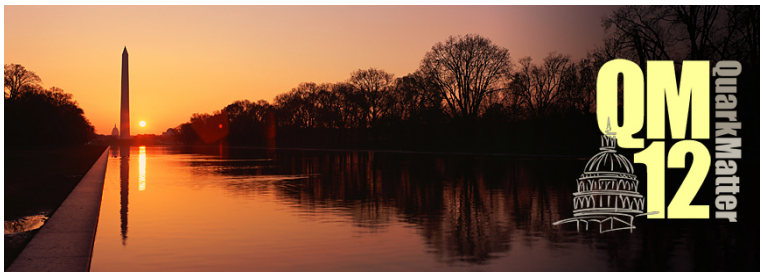

Contribution ID: **369** Type: **Poster**

The PHENIX Forward Silicon Vertex Detector

Thursday, 16 August 2012 16:00 (2 hours)

Two Forward Silicon Vertex Trackers (FVTX) have been installed at the PHENIX Experiment at RHIC, and extend the precision vertex capability of the PHENIX Silicon Vertex Trackers (VTX) to forward rapidity. The FVTX consists of two endcaps, with four silicon mini-strip planes each, covering the angles from ˜10 to 35 degrees (1.2< |y|<2.2) that match the two existing PHENIX muon spectrometer arms. Each silicon plane consists of 48 wedges of mini-strips with 75 micron pitch in the radial direction and lengths in the phi direction varying from 3.4 mm at the inner radius to 11.5 mm at the outer radius. The FVTX has about 0.54 million strips in each forward detector that are read out with FPHX chips which are wire bonded directly to the mini-strips. This chip provides analog and digital processing with zero-suppression and produces a digital output which is data-pushed at 200 Mbps to an intelligent readout board (ROC) containing Field-Programmable Gate Arrays. The maximum occupancy reached in central Au-Au collisions is less than 3%. With an expected distance of closest approach (DCA) resolution of 200 microns or better at 5 GeV/c, we will improve tracking from the original collision vertex and be able to identify secondary particles from in-flight decays. The detector performance during the 2012 RHIC Run will be discussed.

Primary author: DURHAM, J. Matthew (Los Alamos National Laboratory)

Presenter: DURHAM, J. Matthew (Los Alamos National Laboratory)

Session Classification: Poster Session Reception

Track Classification: Heavy flavor and quarkonium production