

Tracking and Vertexing for the Heavy Photon Search Experiment

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Abstract

The Heavy Photon Search (HPS) requires precision tracking and vertexing of e^+e^- pairs against a high background in a difficult experimental environment. The silicon vertex tracker (SVT) for HPS uses actively cooled silicon microstrip sensors with fast readout electronics. To maximize acceptance and vertex resolution with a relatively small detector, the SVT operates directly downstream of the target, close to the beam line, and inside of a dipole magnet. This talk presents the design and performance of the HPS SVT.