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The PHENIX Silicon Vertex Detector Upgrade ERIC MANNEL, Columbia University, PHENIX COLLABORATION — The PHENIX experiment is designed to the study the properties of the dense nuclear matter created in relativistic heavy ion collisions. In order to enhance the physics capabilities of the PHENIX detector, a silicon vertex detector (VTX) is being constructed to provide precise tracking and vertex reconstruction over the full rapidity and azimuthal range of the central spectrometer. By identifying displaced decay vertices, the VTX will be able to identify heavy quark production in proton-proton and heavy ion collisions. In addition, the VTX will be able to reconstruct jets over a large acceptance. The VTX is comprised of a four-layer barrel, with two inner pixel sensor layers and two outer strip sensor layers. This presentation will provide details of the physics capability added to PHENIX by the VTX, the technology choices of the design, and the current status of the project.

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