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**The new Silicon Vertex Detector for the CDF  
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A new Silicon Vertex Detector (SVXII) for the CDF experiment at the Fermilab Tevatron collider is described. The SVXII is formed by 5 layers of double sided silicon microstrip detectors at radii from 2.45 cm to 10.5 cm providing geometric coverage up to 2 units of pseudorapidity. The reduced distance to the interaction region implies that the detectors have to operate in a high radiation level. Facing this environment and addressing the needs for compactness in the structure, minimization of material, mechanical and temperature stability and the  $0.4 * 10^6$  channels to be readout in a dead-timeless mode, represent the biggest challenges of this project.